

International Standard

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ecospecifier global

GREEN TAG[®]

green product certification
trust brands

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QUALITY STATEMENT

This Program is assessed under the Global GreenTag International Quality Management System (QMS) which is certified to ISO 9001:2008. GreenTag management and employees are committed to providing independent third party, accurate product conformance assessments against this standard for all compliant products and providing excellent customer and stakeholder communication and services, as well as committing to the pursuit of continual improvement and environmental and social sustainability within our own organisation.

DOCUMENT ABSTRACT

This Standard specifies environmental and other performance requirements of products under the Global GreenTag Ecolabel Program (GreenTag^{Cert™}). This Program complies with ISO 14024: "Environmental labels and declarations - Guiding principles" which requires environmental labeling specifications to include criteria that are objective, reasonable and verifiable. All Assessments also comply with AS NZS ISO 14021:2000, "Environmental labels and declarations — Type II Self declared environmental claims". All assessments are undertaken in compliance with ISO 17065:2012.

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REFERENCED STANDARDS

ISO 17065: 2012	Conformance Assessment: Requirements for Bodies Certifying Products, Processes and Services
ISO 9001:2015	Quality Management Systems - Requirements
ISO 14020:2015	Environmental labels and declarations - General principles
AS NZS ISO 14021:2016	Environmental labels and declarations - Type II Self declared environmental claims
ISO 14024:2018	Environmental labels and declarations — Type I environmental labeling — Principles and procedures.
ISO 14025: 2006	Environmental labels and declarations — Type III environmental declarations — Principles and procedures
ISO 14040:2006	Environmental management — Life cycle assessment — Principles and framework.
ISO 14044:2006	Environmental management - Life cycle assessment - Requirements and guidelines
ISO 14064-1:2018:	Greenhouse Gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
ISO 14065:2013	Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition.
ISO 14066:2011	Greenhouse Gases: Competence Requirements for Greenhouse Gas Validation Teams and Verification Teams
ISO 14067.2	Carbon footprint of products -- Requirements and guidelines for quantification and communication
ISO 20400:2017	Sustainable procurement - Guidance
UN GHS Rev 2.	United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for use outside Australia
Regulation (EC) 1272/2008,	EU classification, labelling and packaging of substances and mixtures (CLP)- (EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures – GHS Compliant)UE Directive 67/548/EEC for assessing products for use in Australia in accordance with Safe Work Australia's Hazardous Substances Information System (HSIS) and April 2009 update to the 30th Adaptation to Technical Progress to UE Directive 67/548/EEC – also. <i>Approved Criteria for Classifying Hazardous Substances</i> [NOHSC:1008(2004) 3rd Edition and/or have National Exposure Standards declared under the NOHSC <i>Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment</i> [NOHSC:1003(1995)]

GBC Australia	Green Building Council of Australia Green Star™ Technical Manuals: <ul style="list-style-type: none"> - Design & As Build - Interiors - Performance - Legacy Tools - and all subsequent tools and versions
Social Accountability International	Social Accountability Standard SA 8000
Australian Government	Modern Slavery Act 2018 No. 153
New South Wales Government	Modern Slavery Act 2018 No. 30
Living Building Challenge	Standard Version 3.1 and subsequent versions

NOTES FOR REFERENCED STANDARDS

Any references to existing standard includes current versions and their subsequent versions in particularly those called up by reference Green Building and product rating tools, as appropriate.

TERMS & DEFINITIONS

For the purposes of this Guide, the relevant definitions given in ISO/IEC Guide 2 and ISO 8402 apply, together with the following definitions:

Alloy	A combination of two or more metallic elements, especially to give greater strength or resistance to corrosion.
Applicant	The party that is responsible for ensuring that Products meet and, if applicable, continue to meet, the requirements on which the certification is based. An Applicant can be a distributor or manufacturer or assembler.
API	Additional Performance Information (see Section 3.05).
Complying LCA	A life cycle assessment (LCA) in accordance with ISO 14040, ISO 14064 or PAS 2050 including LCADetail sourced LCA as relevant to the product assessment under consideration. A complying LCA may use partial data derived from third party audited sources such as other ecolabels or LCA or life cycle inventory (LCI) etc.
Conformity Assessment Body	A CAB can objectively assess conformity to specified requirements. A CAB can perform conformity assessment activities that include certification, inspection, testing and calibration.
Defined Materials	Materials made up entirely of known Chemical Substances, eg A chemical formulation is a type of homogeneous material prepared according to a defined formula, typically referring to a material in liquid form. A compounded material is a type of homogenous material prepared according to a defined formula, typically referring to a material in solid form. A metal alloy is a combination of two or more metallic substances, especially to give greater strength or resistance to corrosion. Examples for which special conditions on content inventory apply: Metal alloy material; Float glass; Ceramics; Mixed Hardware; Electronics; Reaction Products; Defined substance without identifier.
Direct Responsibility	Fiduciary and legal responsibility for quality, consistency, legal compliance, safety and other issues including reputational risk.
Distributor	A party that buys intermediate or finished products; warehouses and resells them to retailers, end users or other actors in the supply chain but does not add value to the product.
Design for Disassembly	Applies to product streams containing distinct components (e.g. furniture, partitions, storage, etc) and implies products are designed so that components are easily disassembled. The processes which are required in product removal from site and component separation must not involve specialist tools so that a future recycler, Applicant/supplier or another third party, can easily direct the different materials into the appropriate reuse or recycling streams. Flooring product standards may allow for the use of specialist tools to facilitate product component disassembly.
Dose:	Refers to the amount of a chemical absorbed into the body from an exposure.
Endocrine Disruptor	Compounds that mimic, block, or interfere with hormone production, and/or metabolism and/or excretion causing malfunction of the endocrine system and creates potential malfunction/s of the reproductive and/or nervous, and/or immune systems.
Environmental Label	A claim which indicates the environmental aspects of a product or service.
Environmental Declaration	NOTE An environmental label or declaration may take the form of a statement, symbol or graphic on a product or package label, in product literature, in technical bulletins, in advertising or in publicity, amongst other things.
ESCAP	Ecospecifier Cautionary Assessment Process- as defined in Appendix 1.
Exposure	The actual contact that a person has with a chemical. It can be one-time, short-term, or long-term.
Global GreenTag	The Global GreenTag product assessment program, as described by this Standard and its rules of operation. Described herein as GreenTag.

<i>Green or Healthy Building Rating Scheme</i>	A points based sustainability performance rating system for buildings operated by either Government Agencies or Non-government organisation such as a Green Building Council, whether it be mandatory or voluntary.
<i>GreenRate</i>	The product assessment program that assesses products compatibility to various Green or Healthy Building Rating schemes including Green Star™, Green Star SA, Green Star NZ and as relevant to the country of operation of the Global GreenTag operation
<i>Grey Chemicals</i>	For a homogenous material or substance where there is no cas number available or testing is inadequate or no further information is available or there are research papers indicating potential issues that are not being reflected in GHS yet or other recognised toxicity database, then those materials or substances will be identified as 'Grey Chemicals' and it will trigger specific 'Issue of Concern' and the Product will be limited to GreenRate Level C and/or LCARate Silver.
<i>Heavy Metal</i>	Generally considered including those metals with a specific gravity that is at least 5 times the specific gravity of water. Metals of concern include antimony, arsenic, bismuth, cadmium, cerium, chromium, cobalt, gallium, gold, iron, lead, manganese, mercury, nickel, platinum, silver, tellurium, thallium, tin, uranium, and vanadium
<i>Homogenous Materials</i>	A uniform solid, liquid or gas composed of one or more substances that cannot be mechanically disjointed, in principle. It may be a chemical formulation or compound; of undefined composition (UVCB); or a combination of the two. Coatings and finishes such as plating, powder coats, enamels, etc are considered unique homogenous materials.
<i>Impurities</i>	An unintended constituent present in a material/mixture as manufactured. It may originate from the starting materials or be the result of secondary or incomplete reactions during the manufacture process. While it is present in the final substance, it was not intentionally added, eg Cr VI present in Portland cement.
<i>Intended Reaction Product</i>	The products of any chemical reaction that are an intentional part of the production/formulation process of the material/mixture, eg the polymer resulting from a polymerization reaction during plastic or resin manufacture.
<i>Intentionally Used Substance</i>	Any chemical substance that is used (as an input) in the production of the homogenous material, whether or not it is intended to remain in the manufacturer's finished product, eg Monomers, reagents, catalysts, reactive and non reactive additives, auxiliaries, processing aids and other process chemicals, as well as any other chemical substance that is used in making the product, but may be present in reduced amounts (or not at all) in the finished product because it reacts, gets washed off or similar.
<i>Licensee</i>	Qualified and experienced assessors trained in Global GreenTag standards, assessments and reporting procedures and bound under contract to conform to all requisite aspects of this document and Global GreenTag Processes and Codes.
<i>Life cycle</i>	Consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal.
<i>Life Cycle Assessment (LCA)</i>	The assessment of the environmental impact of a given product throughout its lifespan.
<i>Life-Cycle Inventory (LCI)</i>	Quantifying the energy and raw material inputs and environmental releases associated with each stage of production.
<i>Life Cycle Impact Analysis (LCIA)</i>	Assessing the impacts on human health and the environment associated with energy and raw material inputs and environmental releases quantified by the inventory.
<i>NOAECs</i>	No Observed Adverse Effects Concentration. The highest level of a chemical stressor in a toxicity test that did not cause harmful effect in a plant or animal. While NOAELs and NOAECs are similar, they are not interchangeable. A NOAEC refers to direct exposure to a chemical (e.g. through gills or the skin).

NOAELs	No Observed Adverse Effect Levels for any ill-effects that might occur. Also called NOEL is the highest dose in an investigation that does not cause illeffects. A NOAEL refers to a dose of chemical that is ingested.
Part	A single functional grouping of contents. A part is an optional categorization to identify a portion of a product that is used modularly. A part will still be comprised of one or more components, eg Parts for a chair might include armrests, lift mechanisms and castors.
Primary Derivatives of Wood	Products derived from direct processing of timber products from forestry operations & processing of timber into finished wood products. Primary derivation is laminated timber and composite wood products like plywood, OSB or MDF. Paper, cardboard, etc are also considered as primary derivatives of wood. Cellulose derived from wood fibres are not considered a 'primary derivative' but as a 'secondary derivative'.
Product	A 'Product' is any material/s, product/s comprising of parts, homogenous materials, substances, etc or technology undergoing GreenTag certification. Described herein as Product.
Product Assessor	A 'Product Assessor' (also 'Assessor') is a member of the GreenTag certification team responsible for independent assessment of products to determine their conformance or non-conformance to each applicable criterion of this GreenTag International Standard. They are required to be certified by RABQSA, IRCA or other national or international auditor accreditation system.
Product Stewardship:	A product-centred approach to environmental protection implying that operating entities in the product's life cycle (e.g., suppliers, retailers, users) need to share responsibility for reducing its environmental impact. Practically, product stewardship is understood as the Applicant's service to the customer to collect the Product for reuse, recycling or reprocessing whenever the customer no longer requires its service.
Program Director	A 'Program Director' amongst other responsibilities is also liable for decisions relating to its granting, maintaining, extending, suspending and withdrawing of certification; has a role in National Advisory Committee (NAC) and Expert Panel; manages disputes and complaints regarding compliance with the standard.
Post Industrial Material	Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it. Also known as pre-consumer material.
Post Consumer Material	Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain." For the purposes of the calculation, the term 'product' refers to the final product as delivered to the construction site or end user and incorporated in the works.
Recycled Content	The proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, see post-industrial and post-consumer materials definition.
Risk:	Risk is summarised as 'Hazard x exposure' a measure of the likelihood or probability of such damage occurring under particular circumstances of exposure
Routes of Exposure	Ingestion, inhalation, dermal or conjunctival.
Substance	A substance of fixed composition, characterized by its molecular structure(s), which typically has an associated CAS RN (and may also have synonym CAS RNs).
Sufficiently Biodegradable	Chemical compound biodegradability is determined to be sufficient for the purposes of this standard when: - if when tested with one of the methods OECD 301 A, OECD 301 E, ISO 7827, OECD 302 A, ISO 9887, OECD 302 B, or ISO 9888 it shows a percentage degradation of at least 70 % within 28 days,

Supplier

- or if when tested with one of the methods OECD 301 B, ISO 9439, OECD 301 C, OECD 302 C, OECD 301 D, ISO 10707, OECD 301 F, ISO 9408, ISO 10708 or ISO 14593 it shows a percentage degradation of at least 60 % within 28 days,
 - or if when tested with one of the methods OECD 303 or ISO 11733 it shows a percentage degradation of at least 80 % within 28 days,
 - or, for substances for which these test methods are inapplicable, if evidence of an equivalent level of biodegradation is presented.

Tier 1 supplier

Any party that is responsible for producing or manufacturing or assembling of intermediate homogenous materials or substances to be used as inputs for the Product. Where a supplier is only a distributor or wholesaler and adds no value to the Product, they will be classified as Distributors.

Toxicity

Tier 1 supplier is one who is 'Directly Responsible' (see definition) to the Manufacturer or Assembler.

Worst Case Business as Usual

The ability of a chemical to produce adverse effects in living organisms i.e. damage an organ system, to disrupt a biochemical process, or to disturb an enzyme system.

Undefinable Materials (UVCBs)

A BAU product is a product that is in common usage, advertised or available within the region and market of concern, with the highest environmental impact as demonstrated by a market and LCA study of products within the same functional category.

A mixture of Unknown or Variable composition, Complex reaction products or Biological materials, typically with an unrefined nature and/or uncontrolled source, eg mixed aggregate, recycled content, geological material etc.

GLOBAL GREENTAG PROGRAM OPERATION

1.0 INTRODUCTION

1.01 Global GreenTag International

Global GreenTag Pty Ltd operates the Global GreenTag certification scheme under licence from Global GreenTag International Pty Ltd, ACN 155 663 013, is a wholly owned private sector company with no affiliation, financial interests or pecuniary involvement in the manufacturing sector.

Global GreenTag Pty Ltd (GreenTag) is a third-party verified ISO 17065 Conformity Assessment Body (CAB) that conducts the GreenTag^{Cert™} Certification program, an Australian Competition and Consumer Commission (ACCC), USA, Canada and New Zealand approved Certification (Series) Mark undertaking product-focused environmental, health, ethical and social responsibility assessments of products and their manufacturers in accordance with this standard. The program also conducted in accordance with ISO 14024:2018 - Environmental labels and declarations – Type I environmental labelling – Principles and procedures and ISO 14025 - ‘Environmental Product Declarations’, ISO 17065 Conformity assessment – ‘Requirements for bodies certifying products, processes and services and other normative standards.

Documents attesting to the legal registration and accreditation are available on request.

1.02 Terms of Reference

1.02.1. The Need for GreenTag

The GreenTag Program is intended to fill a current void, nationally and internationally for a consistent green product rating scheme that is scientifically derived, life cycle assessment based and includes appropriate assessment of health, ecological and social issues yet cognisant of the economic impacts of products.

The scheme also satisfies the growing demand from the global green product industry for increased simplicity rather than the mushrooming complexity as many different countries introduce their own green rating schemes with existing, sometime multiple schemes operating in the same market or region. The globalization consulting practices also means that organisations are operating within multiple schemes simultaneously.

Currently, no equivalent integrated product rating and assessment service exists outside GreenTag. (This is especially the case in the Green Building Sector).

GreenTag integrates a holistic life-cycle based product assessment approach with a sub-scheme designed to achieve the Certification requirements of various Green Building Councils including Green Building Council of Australia’s Part I- Criteria for Evaluating Product Certification Schemes document required for third party certification of specific Green Star™ credits.

1.02.2. GreenTag Objectives

The GreenTag objective is to provide internationally relevant certification of a reliable and consistent, third party, scientifically assessed, life cycle assessment based product rating and certification system globally that simplifies the green product selection and helps purchasers and specifiers make their decisions in full light of the ecological quality, health, resource and social impacts of their product selection.

It is also designed to provide multi-factor, multi-scheme green or healthy building rating system information to assist global Applicants present consistent, globally relevant information about ecological, health and socially preferred products in a way that allows direct numerical comparison between products to drive product improvement *to reduce impacts and promote restoration of living systems globally.*

1.03 Scope of the Program

Global GreenTag International operates The Global Green Tag^{Cert™} label and its subset LCARate and GreenRate product assessment services, Environmental Product Declaration (EPD) program and other reporting, including Product Health Declarations (Greentag PHDs), HealthRate™, CarbonRate™, WaterRate™ and others that may be developed that together:

- verify Applicants environmental and health claims relating to a Product or Products;
- certify that the product/s meet this Standard (Program Rules);
- award a license that authorises the use of a label on Products;
- is based on multi-criteria standards;
- takes an overall 'cradle to cradle', 'circular economy' focused and Product lifecycle approach;
- indicates overall environmental preferability of a Product within its particular product category and in accordance with particular threshold levels of performance;
- indicates overall health preferability of a Product within its particular product category and in accordance with particular threshold levels of performance;
- provides written product EPDs in accordance with AS NZS ISO 14025, and on request ISO 21930 and EN 15804 as a Program Operator;
- provides written Product Health Declarations;
- once they achieve 'LCARate Bronze' or 'GreenRate level C' conformance products will be awarded a graded achievement label that, when relevant, will via the GreenRate^{Cert™} process, also demonstrate conformance with the country based GBC rating tool requirements;
- include (but are not limited to) green building and development issues such as:
 - buildings & services;
 - interior Fitout, furnishings and equipment (FF&E);
 - facilities management;
 - building maintenance and operations including cleaning and consumables;
 - landscape design; and
 - infrastructure sectors;
 - Paper and packaging;
 - Textiles and fabrics
- are intended for use in both Business to Business and Business to Consumer context;
- involves both Management Committee, Expert Panel and broad stakeholder participation in the Standard setting process;
- commissions second party audits of Product Certification undertaken by accredited and experienced peer reviewers;
- Awards Licence(s) to qualified and experienced conformance assessment professionals.

1.04 Scope of this Document

This standard sets out essential rules under which the Global GreenTag^{Cert™} International Ecolabel Program will assess and certify Products and its various elements in Australia and internationally. This Standard also establishes the sustainability indicators and procedures in awarding the labels and declarations.

1.05 Relationship to ecospecifier Materials Databases

Following successful assessment under this standard and the awarding of a label or declaration appropriate to the level of achievement, GreenTag^{Cert™} Technical Assessments will be published in a one or more, unique and comprehensive databases, including Ecospecifier.com.au, origin.build, ecomoes.com, sustainableminds.com

1.06 GreenTag Product Assessment

GreenTag assesses products across the whole-of-life (WOL) cycle, using a robust life cycle assessment based process and a key range of detailed assessment screens. The assessment and certification process incorporates a full and transparent reporting of the whole-of-environment impact assessment process in all product listings as a minimum assessment of impacts on and/or benefits to:

- Human Health;
- Environmental Quality;
- Resource Depletion; and an analysis of the
- Integrated Design benefits of the product in generating system synergies that reduce the intensity of, or need for, other products or systems within buildings thereby generating cost savings of offsets, plus;
- Biodiversity impact assessments to the extent possible;
- Other third party certification schemes; and includes
- 'Issue of Concern' mild Cautionary Comment/s where relevant;

- 'Red Light' or severe Cautionary Comment/s, where relevant;
- Ethical supply chain reporting including Modern Slavery

This standard includes a unique Human Health and Eco-toxicity Ecospecifier Cautionary Assessment Process (hereinafter referred to as ESCAP) based around the most current version of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and the EU Regulation on the Classification, Labelling and Packaging of Dangerous Substances and Mixtures (CLP regulation) and the related Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is used to assess Products based on element and compound concentrations present within a product via a full composition analysis together with a scale and intensity based risk assessment process.

The basic principle of this system is to approximate the NOAEL, or NOAEC levels of constituents within products via the ESCAP assessment process.

This approach recognises that NOAEL/NOAEC and LC/LD toxicity data are DOSE indicators and as toxicity hazard potential is a function of both dose and exposure, NOAEL/NOAEC levels or LC/LD toxicity data are, in themselves, not able to assess toxicity risk levels of products in manufacture, use (except in the case of VOCs and other gaseous emissions or with extremely detailed *in-situ* chemical specific analysis well beyond the range of any building rating scheme) or disposal.

The system adopted herein allows an approximation of the NOAEL/NOAEC after assessing the likely Probability and Severity of the possible risk before ascribing a hazard/risk level or score which according to the Expert Panel most closely reflects NOAEL/NOAECs.

This ESCAP results in the attribution of an appropriate score and four possible actions/warnings:

- Any product containing 'Banned' substances immediately excluded from certification; OR
- unmodified inclusion of the product assessment in the database; OR
- a Product listing modified with an 'Issue of Concern' mild Cautionary Comment/s including relevant R-phrase/Hazard Statements; OR
- a Product listing modified with an 'Red Light' or severe Cautionary Comment/s including relevant Hazard Statements R-phrase; OR
- exclusion from further assessment and licensing of Label.

This information is then attached to the Product Assessment Report (PAR), Label or PHD to ensure maximum transparency.

1.07 Stakeholder Process

Key stakeholders will be pro-actively approached to contribute to the consultation. A stakeholder database will be maintained to record who has been contacted and contributed to the consultation.

- a) There shall be a public review phase in the development of the standard or later revision of which shall include one round of comment submissions by interested parties, where necessary. The round shall include a period of at least 30 days for the submission of comments. The extent of the consultation process will be determined by both the scope of the revision e.g. administrative and non-substantive changes to the standard can be made at the discretion of GreenTag on advice from the NAC without need of a consultation. The final Standard will be published on the globalgreentag.com or relevant country website
- b) for each round of consultation a public summary of the consultation process will be produced dealing with each substantive comment and the reasons for the decision taken by the program and published on the globalgreentag.com or relevant country website.

1.08 Documented Procedures

All documented procedures relating to this Standard are available to bona fide stakeholders on request, from the Program Director.

2.0 GreenTag^{Cert™} Program

GreenTag^{Cert™} is a range of voluntary, multi-criteria, tiered award, product rating conformance certification processes and Series Certification Marks that include various schemes and programs. The 'LCARate' scheme assesses products using life cycle assessment processes. The 'GreenRate' scheme is directed at Certification within Green or Healthy Building Rating Schemes in Australia and Internationally. The 'HealthRate' scheme assesses products' safety for human health and ecosystems in use, based on Product Health Declarations (PHDs). The 'CarbonRate' scheme measures the relative and absolute greenhouse gas emissions of a product's life cycle compared to a BAU product. The 'WaterRate' scheme measures the water intensity of a product's life cycle compared to a BAU product. The Market context of these associated assessment processes are shown in Figure 1. The overall GreenTag Certification process uses key Assessment Screens including:

2.01 ESCAP Health and Ecotoxicity Analysis

ESCAP (as defined in Appendix 1 and called up in clause 4.1, SAC3) provides the means for determining key indicator comments for consumers and industry in relation to health, occupational health and safety and ecological toxicity. While these issues are dealt with varying extents by the LCA methodology within the LCA rating process, ESCAP gives GreenTag the ability to provide precautionary statements about possible risks and impacts in a qualitative way that should be easily understood by any member of the public. The ESCAP assessment also gives GreenTag a framework by which to exclude products from the assessment if they are deemed to have too significant health and/or ecological impacts to be Certified. This provides a highly detailed, parallel process to the very broad-based LCA health and eco-impact analysis;

- REFERENCE STANDARD AUSTRALIA: Safe Work Australia HSIS System, United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Regulation (EC) 1272/2008 - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures and ESCAP process (see Appendix 1)
- REFERENCE STANDARD GLOBAL: United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Regulation (EC) 1272/2008 - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures and ESCAP process (see Appendix 1).

2.02 LCARATE Program

GreenTag International integrates Life Cycle Assessment (LCA) directly into GreenTag^{Cert™} certification processes by use of commercially available LCA tools loaded with GreenTag proprietary database, in accordance with:

- REFERENCE STANDARD AUSTRALIA:
AS/NZS ISO 14040:1998 Environmental management — Life cycle assessment — Principles and framework.
- REFERENCE STANDARD GLOBAL:
ISO 14040:2006 Environmental management — Life cycle assessment — Principles and framework.

2.03 GreenRate Program

Where relevant, Products will be GreenRate assessed against existing, relevant Green or Healthy Building Rating Tool standards and indicators with summary outcomes listed on the Certificate; as well as the results of the Product assessment scored against relevant Materials Credits and Credit Points available (see below) in accordance with the process described in Section 5.0.

Note: LCA procedures above for LCARate- apply to GreenRate Greenhouse and Water Priority Areas of Concern.

2.04 Subsidiary Schemes

See section 6.0 for Subsidiary schemes such as HealthRate, CarbonRate, WaterRate, etc.

2.05 GreenRate Technical Reference Standards

REFERENCE STANDARDS AUSTRALIA & NEW ZEALAND:

- a) Green Star™¹ Technical Manuals of currently released sector tools and subsequent tools and versions.
- b) Living Building Challenge Standard Version 3.1 and subsequent tools and versions.

REFERENCE STANDARDS INTERNATIONAL:

- a) Living Building Challenge Standard Version 3.1 and subsequent tools and versions.
- b) Other tools as adopted.

2.06 GreenTag assessment Pathways

LCARate and GreenRate are assessed using 2 pathways as described in Figure 2:

- a) The LCARate program can be used for all product assessments to award the GreenTag LCARate Label;
- b) The GreenRate program can be used for products relevant to green or healthy building rating systems and is displayed independently with its own GreenTag Label or combined into a single LCARate/GreenRate Tag
- c) GreenTag PHDs can be consequent to GreenRate or LCARate certifications or a standalone service.
- d) GreenTag EPDs are produced in accordance with the General Program rules, Scheme Document, relevant ISO or EN standards and appropriate PCRs.
- e) Products assessed for CarbonRate or WaterRate must also be assessed using LCARate and will be awarded with an additional rating and label.

2.07 GreenTag Management Committees

The GreenTag program will be overseen in each country by 2 independent committees:

- a) National Advisory Committee.
- b) International Expert Panel.

The NAC and IEP will operate in accordance with the GreenTag Program Rules for NAC and IEP Operation.

2.06.1 The National Advisory Committee

The National Advisory Committee (NAC) advises the GreenTag Management Team on the general oversight of the program operation relevant to their country or region as relevant. It provides and reviews comments on the program and provides advice on any changes to processes and the general operation of this Standard deemed necessary by the committee or any other stakeholder/s. A NAC will be formed in each country where GreenTag is operational.

The Australian NAC is comprised of representatives of industry bodies or associations typical of any NAC. It does not include Applicants representing their own or any other private organisation. It includes up to 12 members where each is selected from one of the following national organisation types:

- 3 Professional Association Representatives
- 2 Environmental/Community NGO Representatives
- 1 University Representative
- 1 Government Representative (where possible and may be replaced by a non industry alternative)
- 5 Manufacturing Sector Industry Association Representatives

The NAC will be chaired by the GreenTag Program Director. The Committee may form sub-committees at its discretion and invite additional members as relevant to any sub-committee. The sub-committee will provide advice as necessary to the Advisory committee. A member of the Advisory Committee must chair the sub-committee.

The NAC will assist GreenTag Program operation with issues as follows:

- i. Operation of the Program
- ii. Further development of this Standard
- iii. Development of any product category specific standards

¹ Green Star™ is a Registered Trade Mark of the Green Building Council of Australia

- iv. Stakeholder review processes;
- v. Dispute or Conflict resolution processes;
- vi. Appeals relating to Certification issues.

2.06.2 International Expert Panels

An expert advisory panel relevant to each major standard will advise the Board and where requested, the NAC. The Expert Panel will comprise a minimum number of 6 experts in key related fields but has no limit to the number of members that may be adopted permanently or temporarily, depending on the technical needs of the Panel.

The Expert Panels will be chaired by the GreenTag Program Director. Expert Panels may form Technical sub-panels at its discretion and invite additional members as relevant to any sub-panel. The sub-panel will provide advice as necessary to the Expert Panel. A member of the Expert Panel must chair the Technical sub-panels.

The IEPs will assist GreenTag Program operation with issues as follows:

- i. Technical issues relating to further development of the relevant Standard;
- ii. Technical issues relating to development of any product category specific standards
- iii. Technical aspects related to Dispute or Conflict resolution processes.

2.06.3 Voting, Committee & Panel Operation

The voting of both the National Advisory Committee and International Expert Panels is on a consensus basis. If consensus is not possible a minimum of 2/3 of the quorum of the Committee or the Panel present is required to approve any issue for recommendation to the Board.

2.08 Conflict Resolution

This programme has adopted a conflict resolution process to manage disputes and complaints regarding compliance with this Standard, auditing outcomes and Applicants. The Policy aims to ensure that the conflict resolution process is:

- i. independent and free from conflicts of interest;
- ii. completed in a timely manner;
- iii. provides an opportunity for appeal by the aggrieved party; and
- iv. provides for public notification of the outcome of the grievance resolution process.

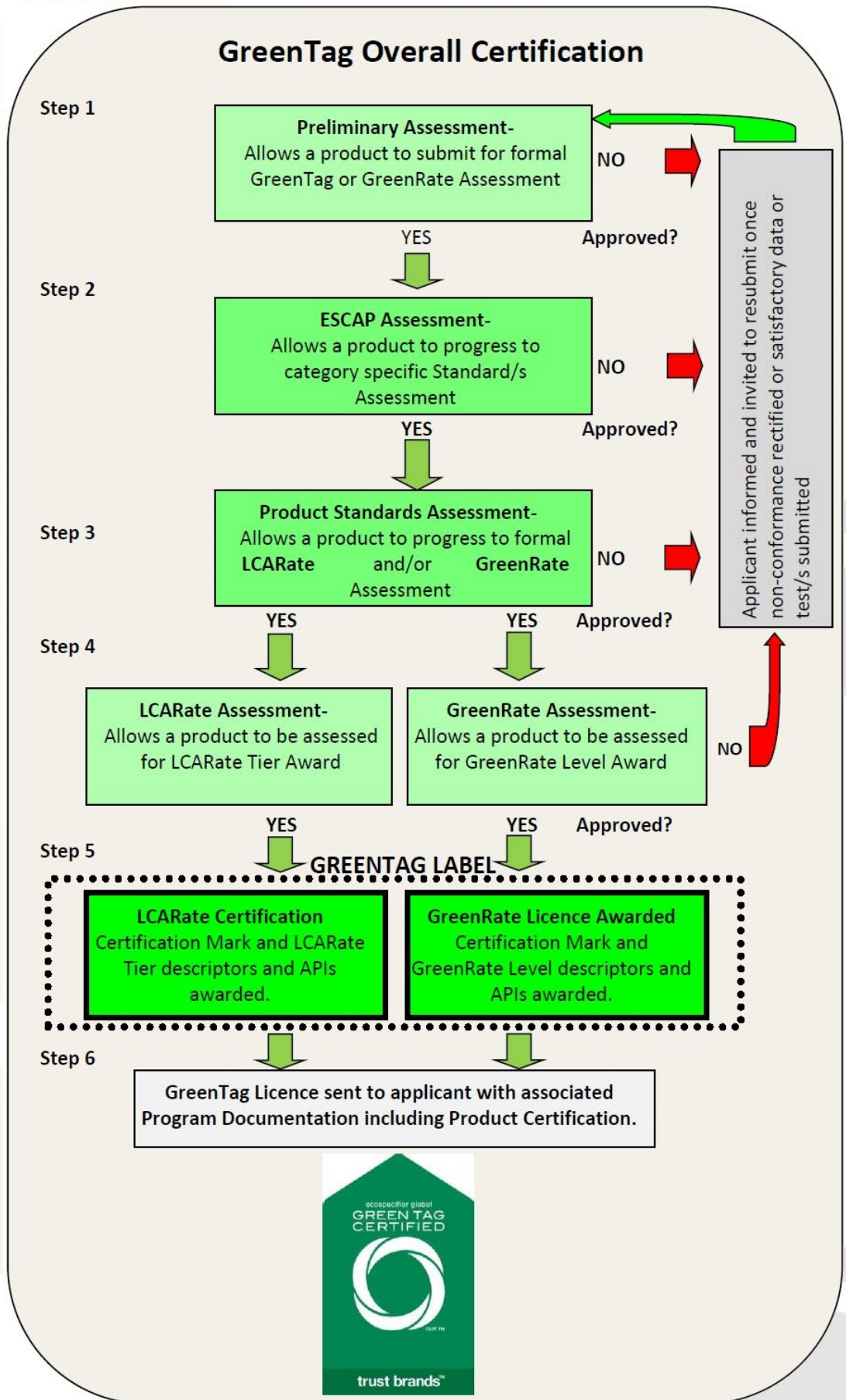


Figure 1: GreenTag

3.0 GREENTAG PROGRAM OPERATION

3.01 Standards

The GreenTag^{Cert™} LCARate Scheme is essentially a 4 tier (Bronze, Silver, Gold and Platinum), points based rating system, recognizing 2 levels of conformance (Streamlined and Plus) in accordance with Section 4.0 of this Standard and recognition of achievement of other factors including certification against the GreenRate Program Standard in accordance with Section 5.0 of this Standard.

- The GreenRate product certification program is a parallel, tiered conformance assessment system based on Green or Healthy Building Rating Scheme Manuals relevant to the Scheme e.g. Green Star™ Technical Manuals, Living Building Challenge Standard or other relevant Technical Specification relating to other National or NGO based Green or Healthy Building Rating Scheme under which a product is to be assessed. Prior to any GreenRate Certification being formally accredited by each Green Building Council, NGO or Government Agency, GreenRate certification is advisory only.
- In Australia and New Zealand and Africa, GreenRate is recognised for Green Star™ conformance assessment, having been developed in accordance with the Green Building Council of Australia's (GBCA) Assessment Framework for Multi-Criteria Product Certification Schemes and is a GBCA recognized product certification scheme.

Both programs are to be assessed under these and related and Normative Standards with the overall program created and maintained in accordance with the principles of ISO 17065, ISO 14024, ISO 14021 and ISO 9001:2008.

3.02 Awarding the Label

Awarding the GreenTag Label is based on:

1. Achievement of one of the 4 tiers within the LCARate Certification processes with awarding of a particular tier recognised by specific text-based and graphic descriptors within the Series Mark.
2. A GreenRate assessment under the GreenRate Certification process and award of the relevant GreenRate Series Mark.
3. Where applicable, EPD, PHD, HealthRate, CarbonRate and WaterRate program rules and processes

A licence to use the Label will include the relevant Series Mark including the appropriate and tier descriptor, LCARate Assessment results, Certificate, additional graphics and Additional Performance Information (API) as determined relevant (See Section 3.05 below) as well as Declaration reporting as appropriate for EPD and PHD

This unique combination of, Certification Mark, LCARate tier attainment descriptor, graphics, GreenRate Assessment results, API, Product Health Declaration and HealthRate, CarbonRate, WaterRate if relevant, will be created for each product assessed, based on the results of the full Product Assessment and will, on Certification, be Licensed to the Applicant for its use (along with use by its agents/representatives and licensees) in advertising and marketing materials relevant to the country (or countries) in which the product is assessed.

The unique artwork and Series Mark variant will be provided to the Applicant for use as a swing tag on products, printed onto packaging, in marketing, advertising, electronic media and online distribution etc. (See Appendix 3 for current graphics).

3.03 Label Rating Tiers

The 4 rating tiers from lowest to highest are Bronze, Silver, Gold and Platinum.

For LCARate, the scoring system to determine tier performance is as specified in Section 4.2.

For HealthRate, the final rating is determined based on the ESCAP in-use process as specified in section 8.0.

3.04 Audited LCA 'PLUS' and LCA 'Streamlined' Recognition

PLUS: Where the Product has undergone a site-based, third party audited assessment process, by GreenTag and an accredited third party agent, the Tier Award level achieved will be modified by the issuing of a Licence to use the 'PLUS' recognition in addition to the Tier Award recognition on the label.

Streamlined: Where the Product uses industry sourced generic inventory and/or has not undergone a site-based third party audited assessment process, by an accredited RABQSA staff or third party agent, the Tier Award level achieved will be modified by the issuing of a Licence to use the 'Streamlined' recognition in addition to the Tier Award

recognition on the label. Bronze Only assessments will only achieve “Streamlined” award, unless the Product received a Bronze rating as the result of an audited full LCA rating process.

3.05 Additional Performance Information

In addition to the Label tier of achievement, the graphic variants of the label for swing tags, marketing etc will also recognise the achievements of the product in relation to the following issues where relevant and possible:

- Whether any ‘Issues of Concern’ (IoC) exist for the Product in accordance with the ESCAP policy ;
- Whether any ‘Red Light Issues’ (RLI) exist for the Product in accordance with the ESCAP policy ;
- Embodied Water: the amount of municipal supply sourced potable or groundwater water embodied in Litres/functional unit;
- Results of the GreenTag GreenRate assessment system,
- Results of the GreenTag HealthRate assessment,
- Results of the PHD,
- Results of the GreenTag CarbonRate assessment,
- Results of the GreenTag WaterRate assessment,
- Comments relating to:
 - The Climatic sensitivity of the information;
 - Any other issues of merit or relevance deemed appropriate in the societal or environmental interest;
 - Other Green or Healthy Building Rating Scheme compatibility where relevant;
 - Baseline Assessment Comparison;
 - A single number GreenTag Ecopoint score;
 - Whether the level of Assessment warrants the PLUS or Streamlined recognition;
 - Any other issues of merit or relevance appropriate in societal or environmental interest;
- Program assessment information:
 - clarifying whether a product, service or process is certified;
 - Country of Assessment;
 - Date of issue of certificate;
 - ‘Valid to’ date;
 - Licence number;
 - Assessment version number and date;
 - Signature and title of authorized officer;
 - Name and Contact details of the Operator;
- Product information:
 - name and address of the Applicant;
 - identification of the product certified and the lot, batch, serial number, model or type number to which the certification applies;
- Any Green Building Council Third Party Certifier Accreditation;
- Any other Certification body Accreditation e.g. JAS/ANZ and GreenTag second party auditor.

See Sections 4.0 and 5.0 for detail of Product Assessment Processes.

3.06 Online Database/s

Once GreenTag Certified, the Product will be listed with appropriate Award recognition, on the globalgreentag.com and ecospecifier online databases relevant to the countries/regions the Product is available to, e.g. in Australia, the www.globalgreentag.com, www.ecospecifier.com.au sites and/or the www.ecospecifier.com site or other websites relating to specific geographical areas.

3.07 Currency and Renewal

Each GreenRate and LCARate, PHD, HealthRate, CarbonRate and WaterRate Product Assessment will have currency of one year and required annual renewal to maintain the Licence. For Best Practice PVC (BPPVC) assessments, see Supplementary Standard 9.15 Best Practice PVC.

Applicants are required to have Product/s renewed each year based on submission of a Applicant’s Renewal Declaration by a Director or Principal for each of another 2 years. Upon 4th year, the Products will have to be re-certified. Certificates that involve audit assessment will require re-audit on each 3rd Anniversary.

Any Certified Product will include the validity period of the assessment clearly within the certificate.

3.08 Product Fitness Characteristics

Fitness for purpose will be considered as an essential indicator of product fitness for awarding of a licence. For the purpose of this Standard, fitness for purpose implies that a Product satisfies health, safety and consumer performance needs.

3.09 Stakeholder Consultation

Key Professional, Industry and other stakeholder groups will be consulted in a process in accordance with ISO 14024:1999 Environmental Labels and declarations – Type I environmental labelling – Principles and Procedures. Formal open participation among interested parties will be established from the beginning for the purpose of selecting and reviewing product categories, product environmental criteria and functional characteristics.

3.10 System Development

The rating score thresholds shown in this document are subject to ongoing development prior to launch and as follows:

3.10.01 Continuous Improvement

The Standard Indicator Thresholds will be regularly reviewed as part of the Continuous Improvement process in accordance with ISO 9001:2008 and ISO 14024:2000.

3.10.02 Standard Review Period

The period of review for this Standard will be maximum 3 years, however, in line with Continuous Improvement; Product Assessment Criteria may be reviewed within this period.

3.11 Recognition of Assessment Version

Any change in thresholds or Product Assessment Criteria will be recognised by a change in Assessment version number and date within the artwork issued to products bearing the Tiered Certification Mark. Where a Product does not comply with subsequently lowered (or raised) thresholds, the Product will continue to be able to use the originally issued Certified Mark logo showing the Standard version and date against which the Certificate was originally issued until the 3rd anniversary of assessment, when it is required to be assessed under current version or the Licence is revoked.

3.12 Compliance and verification

All aspects of product compliance and performance shall be evaluated by GreenTag Accredited Assessors within the level of compliance recognised by the Tier Awards. Global GreenTag shall assign at least one person to peer review all information and results related to the evaluation. This review shall be carried out by person(s) who have not been involved in the evaluation process. The Program Director shall be finally responsible for the determination of the Award and awarding of Certification. The methods for assessing compliance make use of the following evidence where relevant, in order of preference:

- Compliance with this Standard;
- Certification under ISO and IEC standards: and/or
 - other internationally recognized standards; and/or
 - regional and national standards; and/or
- other repeatable and reproducible methods which follow accepted principles of good laboratory practice (see ISO/IEC 17025 for information on good laboratory practice); and/or
- Third party verified data sources;
- Manufacturer Declarations under Legal Requirements e.g. MSDS;
- GreenTag expert assessment and/or audit; and
- Applicant provided evidence (supported by audit where required or noted as not audited).

3.13 Transparency

Transparency will be maintained through all stages of development and operation. Transparency implies that information shall be available to interested parties for inspection and comment where appropriate. Adequate time will be allowed for comments to be submitted including:

- selection of product categories;
- selection and development of product environmental criteria;
- product function characteristics;
- testing and verification methods;
- certification and award procedures
- review period;
- period of validity;
- non confidential evidence on which the awarding of the label is based;
- funding sources for the program development (e.g. fees, government financial support etc.);
- compliance verification.
- transparency will not conflict with the requirements of 3.19 Confidentiality clause.

3.14 International trade aspects

Procedures and requirements are not prepared, adopted or applied with a view to, or with the effect of creating unnecessary obstacles to international trade. The applicable provisions and interpretations of the World Trade Organization (WTO) will be taken into account.

3.15 Accessibility

Application to, and participation in, the GreenTag^{Cer™} program is open to all potential manufacturer and Applicant/supplier proponents with Products that successfully fulfill the product environmental criteria for a given rating tier and other program requirements. Any successful Applicant/product proponent will be entitled to be granted a licence and authorized to use the label. Fees and conditions to access the GreenTag program will be consistently applied across all Applicants, without any conditions related to the size of the supplier or membership of any association or group, nor shall certification be conditional upon the number of certificates already issued. The certification body can decline certification based on Applicant or their factory participating in illegal activities or having history of repeated legally enforced environmental or worker health non-compliances.

3.16 Scientific basis of product environmental criteria

The development and selection of criteria are based on sound scientific, life cycle impact assessment and engineering principles. The criteria are derived from data that support the claim of environmental preferability.

3.17 Avoidance of conflict of interest

GreenTag will ensure that the process is free from undue influence and that sources of funding will not create a conflict of interest.

3.18 Costs and fees

Fees may include application, assessment and certification or recertification, testing, administration or marketing support fees as may be published or provided from time to time. In principle, the costs and fees for the granting and maintaining of a label will:

- i) be based on recovery of all program costs; and
- ii) be kept as low as possible to maximize accessibility;
- iii) be applied equitably to all Applicants and licensees.

Separate fees may be imposed for specific LCI development or if on-site audits are deemed to be required. In general, any such fee will be identified in advance of commitment to the product assessment. Any Audit fees will:

- i) include reimbursement for costs associated with the audit including travel, meals and misc. costs;
- ii) be provided in the form of a lump sum quotation;

- iii) be paid by the Applicant a minimum 7 days in advance of departure or inspection date if local inspectors are being used and be subject to cancellation fees once confirmed.

Fees will not be based on a percentage of turnover.

3.19 Confidentiality

The confidentiality of all information which is identified as confidential via the execution of an agreed Confidentiality Agreement will be maintained.

3.20 Mutual recognition

Mutual recognition between GreenTag and other ecolabel organisations, based on mutual confidence, is welcomed and encouraged. Mutual recognition may include but not be limited to:

- mutual recognition of tests,
- inspections, conformity assessment, administrative procedures and, where appropriate, product assessment criteria.
- to ensure full transparency, information on existing mutual recognition agreements with other eco-labelling bodies shall be made available as appropriate.

3.21 Documentation

Applicants seeking Certification must provide the following information as a minimum:

- i) a full declaration of substances down to 0.01% by weight for each homogenous material used in the final product (or further such more detailed requirements as may be required by sector specific or Supplementary Standards);
- ii) all required GreenTag Questionnaires and Declarations completed and including place of manufacture or assembly of each raw material or component;
- iii) All Applicants and/or suppliers to sign a declaration confirming that the Product does not contain any banned ingredients.
- iv) Safety Data Sheet (SDS) for all chemical components including constituent dyes, tints or inks;
- v) current certification for any ISO or other standards compliance claimed- including FSC, PEFC (or any member scheme), ISO 9001, 14001, other 14024 Type 1 Ecolabels, or 14025/21930/EN15804 Type 3 Environmental Performance Declarations
- vi) third party laboratory testing or other audits as required to demonstrate key product claims or to demonstrate compliance with specific product standards as per Appendix 2 ;
- vii) where emissions to water are involved in key manufacturing processes (e.g. wool scouring, water bath dyeing, leather tanning etc), effluent emissions testing showing compliance with Environment Protection Authority/Government Licence conditions or ANZEC or WHO Water Quality Guidelines;
- viii) compliance with relevant social and environmental legislative or other legal requirements including International Labour Organisation's conventions;
- ix) indication of status regarding participation in Corporate Social Responsibility (CSR) programs or Standards e.g. SA8000 or the Global Reporting Initiative's (GRI) 'Sustainability Reporting Guidelines';
- x) any other information deemed necessary by GreenTag to demonstrate compliance.
- xi) Submit to any audit of materials supply chain or manufacturing processes or emissions related issued as required
- xii) VOC – Where this standard requires specific VOC emission testing, GreenTag will accept other VOC standard/s which are relevant to any market/s or rating tool/s, the product is exported to, for certification in that country or under the specific rating tool.

An Applicant seeking GreenRate Certification must also provide evidence of the following as a minimum:

- a) the post consumer and post industrial recycled content of all constituents;
- b) specific VOC, TVOC and emissions of components;
- c) formaldehyde emissions;
- d) any third party certified life cycle data as relevant
all in accordance with required testing protocols.

Where an Applicant seeks GreenRate Certification for a product that relates to the Green Star Materials Calculators, evidence towards compliance to the following must also be provided:

- i) data on material usage and waste generation in a format that allows optimisation of the production process,
- ii) a commitment to optimise the production process;
- iii) resource efficiency, i.e., optimisation of materials sourcing and production processes
- iv) water use accounting- sufficient to allow calculation and reporting of comprehensive product life cycle water footprint (where relevant)
- v) fitness for purpose;
- vi) availability of replacement parts and repair/service functions;
- vii) product stewardship program (where relevant)
- viii) design for disassembly (where relevant)

All evidence submitted to be in accordance with the relevant GBCA Green Star Technical Manuals or other Green Building Scheme technical requirements.

For applications relating to International Green or Healthy Building Rating Schemes, submission requirements may change according to the Credits and the Scheme being assessed.

Under some circumstances, aspects of the above may be subject to on-site audit. The Applicant will be informed in advance of committing to the Certification whether audit will be part of the assessment. Audits may occur with notice or without subject to the issue being assessed.

3.22 Documentation Requirements for Renewal

Each year prior to renewal of the Licence, the Applicant must supply as a minimum, a Declaration signed by a Director or Principal of the company or organisation, stating:

- i) There have been no changes to the product's design, specification or composition of the product;
 - ii) There have been no changes to the manufacturing process of the product;
 - iii) There have been no changes to the sourcing of raw materials of the product;
 - iv) There have been no relevant changes to the Management Systems relating to the product Certification;
 - v) or changes in the ownership, structure or management of the Applicant;
- OR
- vi) Providing full information as to the changes and if deemed necessary by GreenTag any further details requested.
 - vii) Additional documents required if Applicant seeks a higher certification level;
 - viii) Submitting to audit if deemed necessary by GreenTag.

3.23 Applicant Responsibility

It is the responsibility of the Applicant to:

- a) complete an official Application form, Product Declaration, all signed by a duly authorized representative of the Applicant, in which or attached to which are the following:
 - i. the scope of the desired certification;
 - ii. a statement that the Applicant agrees to comply with the requirements for certification and to supply any information needed for evaluation of products to be certified.
- b) The Applicant, as a minimum, shall provide the following:
 - i. corporate entity, name, address and legal status;
 - ii. a definition of the products to be certified, the certification system, and the standards against which each product is to be certified if known to the Applicant;
 - iii. applicable fee;
 - iv. A completed product Questionnaire and all other documentation required by the Program Procedures listed in 3.21 above and requested throughout the assessment;
- c) Maintain its annual Certification fee 12 months in advance as required;
- d) Comply with the Terms and Conditions, Licence and the Rules for Use of the Mark contained in the Style Guidelines as published from time to time on the globalgreentag.com website;
- e) Not reproduce in part any Product Assessment without written approval from GreenTag Program Director;
- f) Apply the Logo only to packing advertising and marketing collateral directly related to the Certified Product;
- g) Avoid Incorrect references to the certification system or misleading use of licences, certificates or marks, found in advertisements, catalogues, etc., to avoid withdrawal of certificate, corrective, legal or other suitable actions.
- h) Make all necessary arrangements for the provision of required evidence and/or conduct of the evaluation, including provision for examining documentation and access to all areas, records (including internal audit reports) and personnel for the purposes of evaluation (e.g. testing, inspection, assessment surveillance, reassessment) and resolution of complaints;

- i) Inform GreenTag of any change in the Certified product or manufacturing process that is likely to significantly affect the product's design or specification, or changes in the ownership, structure or management of the Applicant, if relevant, or any other information that indicates the product may no longer comply with the requirements of this Standard;
- j) In the event of GreenTag determining changes have been made to product or supplier details as per 3.22 above and not notified to GreenTag, the Applicant will, on receipt of an GreenTag 'Notice to Rectify', immediately provide GreenTag with the required details and any fees necessary to allow recertification. Failure to do so may result in the withdrawal of the Licence. If the product Licence is withdrawn, the manufacture must, within 7 days, cease to further promulgate all product marketing, packaging, advertising or other material carrying the logo. Furthermore all material carrying the Logo will be withdrawn within 90 days.
- k) Always fulfil the Global GreenTag Certification requirements, including implementing the appropriate changes when they are communicated by Global GreenTag.
- l) keep a record of all complaints made known to the Applicant relating to a certified product's compliance with requirements of the relevant standard :
 - i. make these records available to the certification body when requested;
 - ii. take appropriate action with respect to such complaints and any deficiencies found in products or services that affect compliance with the requirements for certification;
 - iii. document the actions taken.

3.24 GreenTag Organisation

To foster confidence in its operation of the GreenTag^{Cert™} program, GreenTag undertakes to operate in accordance with ISO 17065 'Conformity assessment - Requirements for bodies certifying products, processes and services' and but:

- a) be impartial
- b) be responsible for decisions relating to its granting, maintaining, extending, suspending and withdrawing of certification;
- c) identify the management (committee, group or person) that will have overall responsibility for all of the following:
 - i. performance of testing, inspection, evaluation and certification as defined in this Guide,
 - ii. formulation of policy matters relating to the operation of the certification body,
 - iii. decisions on certification,
 - iv. supervision of the implementation of its policies,
 - v. supervision of the finances of the body,
 - vi. delegation of authority to committees or individuals as required to undertake defined activities on its behalf,
 - vii. technical basis for granting certification;
- d) have documents which demonstrate it is a legal entity;
- e) have a documented structure which safeguards impartiality including provisions to ensure the impartiality of the operations of the certification body; this structure shall enable the participation of all parties significantly concerned in the development of policies and principles regarding the content and functioning of the certification system;
- f) ensure that each decision on certification is taken by a person(s) different from those who carried out the evaluation;
- g) have rights and responsibilities relevant to its certification activities;
- h) have adequate arrangements to cover liabilities arising from its operations and/or activities;
- i) have the financial stability and resources required for the operation of a certification system;
- j) employ a sufficient number of personnel having the necessary education, training, technical knowledge and experience for performing certification functions relating to the type, range and volume of work performed, under a responsible senior executive;
- k) have a quality system giving confidence in its ability to operate a certification system for products;
- l) have policies and procedures that distinguish between product certification and any other activities in which the certification body is engaged;
- m) together with its senior executive and staff, be free from any commercial, financial and other pressures which might influence the results of the certification process
- n) have formal rules and structures for the appointment and operation of any committees which are involved in the certification process; such committees shall be free from any commercial, financial and other pressures

- that might influence decisions; a structure where members are chosen to provide a balance of interests where no single interest predominates will be deemed to satisfy this provision;
- o) ensure that activities of related bodies do not affect the confidentiality, objectivity and impartiality of its certifications, and it will not
 - i) supply or design products of the type it certifies,
 - ii) give advice or provide consultancy services to the Applicant as to methods of dealing with matters which are barriers to the certification requested,
 - iii) provide any other products or services which could compromise the confidentiality, objectivity or impartiality of its certification process and decisions;
 - p) analyse relationship with related bodies to determine possibilities for conflict of interest:
 - i. employees: are not involved in certification process if they have any conflict of interest with any client within two years of the date of application for certification;;
 - ii. subcontractors: are required to report any conflict of interest prior to executing the project contract;
 - iii. clients: are not provided advice or consulting in relation to achieving certification;
 - iv. partners: remain independent.
 - q) have policies and procedures for the resolution of complaints, appeals and disputes received from Applicants, suppliers or other parties about the handling of certification or any other related matters.

3.25 GreenTag Responsibility

GreenTag further undertakes to comply with the detailed requirements of ISO 17065 'Conformity assessment -- Requirements for bodies certifying products, processes and services', including but not limited to the following:

3.25.01 Staff

- a) ensure personnel shall act in accordance with the Global GreenTag HR Policy and Procedure Manual and shall be competent for the functions they perform, including making required technical judgments, framing policies and implementing them. The person who takes the decision on granting/withdrawing certification has a level of knowledge and experience sufficient to evaluate the information obtained from the evaluation process.
- b) clearly document instructions that are available to the personnel describing their duties and responsibilities. These instructions shall be maintained up to date;
- c) Clearly define the minimum relevant criteria for the competence of personnel;
- d) require its personnel involved in the certification process to sign a contract or other document by which they commit themselves:
 - to comply with the rules defined by GreenTag, including those relating to confidentiality and independence from commercial and other interests as defined in the Global GreenTag Anti Corruption, Anti Bribery and Conflict of Interest policy; and
 - to declare any potential conflicts including prior and/or present association on their own part, or on the part of their employer, with an Applicant, supplier or designer of products to the evaluation or certification of which they are to be assigned.
- e) ensure that and document how, any contracted personnel for their own part, and on the part of their employer if any, satisfy all the requirements for personnel outlined in the herein.
- f) Require independent Auditors and product Auditors and Assessors to be accredited auditors registered by RABQSA, IRCA or other national or international auditor accreditation system and to be completely independent in their assessment of products. Assessors do not make any decision on granting, maintaining, extending, suspending or withdrawing certification;
- g) maintain information on the relevant qualifications, training and experience of each member of the personnel involved in the certification process. Records of training and experience to be kept up to date, in particular the following:
 - (i) name and address;
 - (ii) organisation affiliation and position held;
 - (iii) educational qualification and professional status;
 - (iv) experience and training in each field of the certification body's competence;
 - (v) date of most recent updating of records;
 - (vi) performance appraisal.

3.25.02 Fees

Maintain a current uniform Schedule of fees equal for all products and notify Applicants in advance of any change to the fees;

3.25.03 Confidentiality

- a) execute a Confidentiality Agreement on request by any Applicant/Supplier and ensure this agreement also binds all staff, Assessors, subcontractors and/or agents where relevant;
- b) have adequate arrangements consistent with applicable laws to safeguard confidentiality of the information obtained in the course of its certification activities at all levels, including committees and external bodies or individuals acting on its behalf;

3.25.04 Application for Certification

- a) provide Applicants an up-to-date detailed description of the evaluation and certification procedures, appropriate to the GreenTag^{Cert™} program, and the documents containing the requirements for certification, the Applicants' rights and duties of suppliers which have certified products (including fees to be paid by Applicants and suppliers of certified products).
- b) require Applicants to:
 - i. always complies with the relevant provisions of the certification programme;
 - ii. make all necessary arrangements for the conduct of the evaluation, including provision for examining documentation and access to all areas, records (including internal audit reports) and personnel for the purposes of evaluation (e.g. testing, inspection, assessment surveillance, reassessment) and resolution 'of complaints;
 - iii. Provide samples of the Products undergoing assessment
 - iv. make claims regarding certification only in respect of the scope for which certification has been granted;
 - v. not use its product certification in such a manner as to bring the certification body into disrepute and does not make any statement regarding its product certification which the certification body may consider misleading or unauthorized;
 - vi. upon suspension or cancellation of certification, discontinue its use of all advertising matter that contains any reference thereto and returns any certification documents as required by GreenTag;
 - vii. use certification only to indicate that products are certified as being in conformity with specified standards;
 - viii. endeavour to ensure that no certificate or report nor any part thereof is used in a misleading manner;
 - ix. make comment or inclusions solely in accordance with license requirements in making reference to its product certification in communication media such as online, emails, documents, brochures or advertising.
 - x. provide any explanation needed to the Applicant in relation to the operation of GreenTag. If requested, additional application information shall be provided to the Applicant.

3.25.05 Preparation for evaluation

- a) Before proceeding with evaluation, GreenTag will conduct, and maintain records of, a review of the application for certification to ensure that
 - i. the requirements for certification are clearly defined, documented and understood
 - ii. any difference in understanding between GreenTag and the Applicant is resolved
 - iii. GreenTag has the capability to perform the certification service with respect to the scope of the certification sought and, if applicable, the location of the Applicant's operations and any special requirements.
- b) prepare a plan for evaluation activities to allow for the necessary arrangements to be managed
- c) assign personnel appropriately qualified to perform the tasks for the specific evaluation. Personnel (including Licensees) will not be assigned if they have been involved in, or been employed by a body involved in, the design, supply, installation or maintenance of such products in a manner and within a time period which could conflict with impartiality ensuring that a comprehensive and correct evaluation is carried out, the personnel involved will be provided with the appropriate working documents.

3.25.06 Product Certification and Applicant Licensing

- a) evaluate the product in accordance with information provided;

- b) determine whether or not to certify a product based on the information gathered during the evaluation process and any other relevant information. All decisions relating to Product Certification shall be made by the Program Director or delegate (who shall be a competent person, not performing product evaluation).
- c) provision of a Licence for use of the Logo) and Rules for Use of the Mark, Style Guide and Product Certification Documents if the product assessment report supports Certification;
- d) re-evaluate the Product Certification in the event of changes significantly affecting the product's design or specification, or changes in the standards to which compliance of the product is certified, or changes in the ownership, structure or management of the Applicant, if relevant, or in the case of any other information indicating that the product may no longer comply with the requirements of the certification system;
- e) give 14 days Notice to Rectify in the event of GreenTag determining changes have been made to product or supplier details as per 3.22 above and GreenTag has not been notified. Thereafter GreenTag may withdraw the Licence. Any product for which the Licence has been withdrawn will be published by GreenTag by means of Public Notice on its website/s and in two consecutive Product Newsletter e-letter broadcasts.
- f) ensure that activities of related bodies do not affect the confidentiality, objectivity and impartiality of its certifications, and it shall not:
- g) not delegate authority for granting, maintaining, extending, suspending or withdrawing certification to an outside person or body.
- h) provide to each Applicant offering certified products, formal certification documents such as a letter or a certificate signed by an officer who has been assigned such responsibility. These formal certification documents shall permit identification as a minimum, of the following:
 - i. the name and address of the Applicant whose products are the subject of certification;
 - ii. the scope of the certification granted, including, as appropriate,
 - 1) the products certified, which may be identified by type or range of products,
 - 2) the product standards or other normative documents to which each product or product type is certified,
 - 3) the applicable certification system;
 - 4) the effective date of certification, and the term of the certification if applicable.
- i) decide, in response to an application for amendment to the scope of a certificate already granted, what, if any, evaluation procedure is appropriate in order to determine whether or not the amendment should be made and act accordingly. Decision will be made by the Program Director or delegate (who shall be a competent person, not performing product evaluation).
- j) may require re-evaluation of the product in the instance the Applicant informs or GreenTag determines that any of the following changes have occurred and the changes significantly affect the product. The changes that may trigger re-evaluation if relevant are:
 - i. product design, specification or composition,
 - ii. changes in the standards to which compliance of the product is certified,
 - iii. changes in the ownership, structure or management of the Applicant,
 - iv. intended modification to the product, manufacturing process or, if relevant, its quality system which affect the conformity of the product.
 - v. any other information indicating that the product may no longer comply with the requirements of the certification system.

In the case of any of the above occurring, GreenTag will determine whether the announced changes require further investigations. If such is the case, the Applicant is not permitted to release certified products resulting from such changes until GreenTag has notified the Applicant accordingly.
- k) review of the product is undertaken on a minimum annual basis.
- l) surveillance of the certified products is to be documented
- m) personnel appointed to evaluate the conformance of the products shall provide GreenTag with a report of findings as to the conformity with all the certification requirements;
- n) promptly bring to the Applicant's notice GreenTag's full Product Assessment report (Product Listing) on the outcome of the evaluation identifying any nonconformities that have to be discharged in order to comply with all of the certification requirements and the extent of further evaluation or testing required. If the Applicant can show that remedial action has been taken to meet all the requirements within a specified time limit, the certification body shall repeat only the necessary parts of the Initial procedure.

- o) give due notice of any changes it intends to make in requirements for certification. Following the publication of changed requirements, GreenTag will verify that each Applicant makes any necessary adjustments within a reasonable time.
- p) exercise proper control over ownership use and display of licenses, certificates and marks of conformity.

3.26 Recognition of Testing Laboratories

Only testing undertaken by laboratories that are registered by the Australian National Association of Testing Authorities (NATA) or is approved by a member of the International Laboratory Accreditation Cooperation (ILAC) or the Asia Pacific Laboratory Accreditation Cooperation (APLAC), or laboratories which are in compliance with ISO 17025 are recognised under this standard.

3.27 GreenTag Operations

GreenTag will take all steps necessary to evaluate conformance with the relevant product standards according to the requirements of GreenTag (or other specific product certification system-see Note 2 below). GreenTag or its licensees will specify the relevant standards or parts thereof and any other requirements such as sampling, testing and inspection requirements which form the basis for the applicable certification system. In conducting its certification operations, GreenTag will observe, as appropriate, the requirements for the suitability and competence of body(ies) or person(s) carrying out assessment testing, inspection and certification/registration as specified in ISO/IEC 17025, 17020, 17021 and 17065.

3.28 Subcontracting

When GreenTag subcontracts work related to certification (e.g. assessment, testing or inspection) to an external body or person, a properly documented agreement covering the arrangements including confidentiality and conflict of interest will be drawn up. GreenTag will:

- a) take full responsibility for such subcontracted work and maintain its responsibility for granting, maintaining, extending, suspending or withdrawing certification;
- b) ensure that the subcontracted body or person is a competent accredited auditor and complies with the applicable provisions of ISO 17065 and other standards and guides relevant to testing, inspection or other technical activities (see Note 1 below), and is not involved either directly or through the person's employer with the design or production of the product in such a way that impartiality would be compromised;
- c) obtain the Applicant's consent;
- d) have arrangements in place for confirming the scope, currency and applicability of the certification it is relying upon, and other data pertaining to the competency of the body it is relying upon, before the issue of its own certification.

Notes:

- 1) Where work related to certification has been undertaken prior to the application for certification, the body may take account of it, provided it can take responsibility as detailed in 3.28a) and satisfy itself regarding the matters detailed in 3.28 b).
- 2) The requirements given in 3.28 a) and b) are also relevant by extension, when a certification body uses, for granting its own certification, work performed by another assessment or certification body with which it has signed an agreement or is a recognized third party ecolabel body.

3.29 Quality system

3.29.01 The management of GreenTag having executive responsibility for quality has defined and documents its policy for quality and its objectives for and commitment to, quality. The management undertakes to ensure that this policy is understood, implemented and maintained at all levels of the organisation.

3.29.02 GreenTag will continue to operate an effective quality system in accordance with ISO 9001:2015 and the relevant elements of ISO 17065 as below appropriate for the type, range and volume of work performed. This quality system will be documented and the documentation available for use by the certification body staff. GreenTag further undertakes to ensure effective implementation of the documented quality system, procedures and instructions and designate a person having direct access to its highest executive level who, irrespective of other responsibilities, shall have defined authority for:

- a) ensuring that a quality system is established, implemented and maintained in accordance with this Guide, and
- b) reporting on the performance of the quality system to the body's management for review and as a basis for improvement of the quality system.

3.29.03 The quality system is documented in a quality manual and associated quality procedures, and the manual contains or refers to at least the following:

- a) a quality policy statement;
- b) a brief description of the legal status of the certification body, including the names of its owners and, if different, names of the persons who control it;
- c) the names, qualifications, experience and terms of reference of the senior executive and other certification personnel, both internal and external;
- d) an organization chart showing lines of authority, responsibility and allocation of functions stemming from the senior executive;
- e) a description of the organization of the certification body, including details of the management (committee, group or person) identified in 3.2 c), its constitution, terms of reference and rules of procedure;
- f) the policy and procedures for conducting management reviews;
- g) administrative procedures including document control;
- h) the operational and functional duties and services pertaining to quality, so that the extent and limits of each person's responsibility are known to all concerned;
- i) the procedure for the recruitment, selection and training of certification body personnel and monitoring of their performance;
- j) a list of its approved subcontractors and the procedures for assessing, recording and monitoring their competence;
- k) its procedures for handling nonconformities and for assuring the effectiveness of any corrective and preventive actions taken;
- l) procedures for evaluating products implementing the certification process, including:
 - i) conditions for issue, retention and withdrawal of certification documents,
 - ii) controls over the use and application of documents employed in the certification of products; the policy and procedure for dealing with appeals, complaints and disputes; its procedures for conducting internal audits, based on the provisions of ISO 10011-1

3.30 Conditions and procedures for granting, maintaining, extending, suspending and withdrawing certification

3.30.01 The conditions for granting, maintaining and extending certification and the conditions under which certification may be suspended or withdrawn, partially or in total are included in the Licence and Terms and Conditions.

3.30.02 The QMS includes procedures to:

- a) grant, maintain, withdraw and, if applicable, suspend certification;
- b) extend or reduce the scope of certification;
- c) re-evaluate, in the event of changes significantly affecting the product's design or specification, or changes in the standards to which compliance of the product is certified, or changes in the ownership, structure or management of the Applicant, if relevant, or in the case of any other information indicating that the product may no longer comply with the requirements of the certification system.

3.31 Internal audits and management reviews

3.31.01 GreenTag conducts periodic internal audits covering all procedures in a planned and systematic manner, to verify that the quality system is implemented and is effective in ensuring that:

- a) personnel responsible for the area audited are informed of the outcome of the audit;
- b) corrective action is taken in a timely and appropriate manner; and
- c) the results of the audit are documented.

- 3.31.02 GreenTag's management with executive responsibility reviews its quality system at defined intervals which are sufficiently short to ensure its continuing suitability and effectiveness in satisfying the requirements of ISO 17065 and the stated quality objectives. Records of such reviews are maintained.

3.32 Documentation

- 3.32.01 GreenTag^{Cert™} provides (through publications, electronic media or other means), update at regular intervals, and make available on request, the following:
- information about the authority under which GreenTag operates as certification body;
 - a documented statement of its product certification system, including its rules and procedures for granting, maintaining, extending, suspending and withdrawing certification;
 - information about the evaluation procedures and certification process related to GreenTag^{Cert™};
 - a description of the means by which the organization obtains financial support and general information on the fees charged to Applicants and to suppliers of certified products;
 - a description of the rights and duties of Applicants and suppliers of certified products, including requirements, restrictions or limitations on the use of the certification body's logo and on the ways of referring to the certification granted;
 - information about procedures for handling complaints, appeals and disputes;
 - a directory of certified products and their suppliers.
- 3.32.02 GreenTag has established and maintains procedures to control all documents and data that relate to its certification functions. These documents shall be reviewed and approved for adequacy by appropriately authorized and competent personnel prior to issuing any documents following initial development or any subsequent amendment or change being made. A listing of all appropriate documents with the respective issue and/or amendment status identified shall be maintained. The distribution of all such documents shall be controlled to ensure that the appropriate documentation is made available to personnel of the certification body or Applicants when they are required to perform any function relating to the certification body's activities.

3.33 Records

- 3.33.01 GreenTag maintains a record system to suit its particular circumstances and to comply with existing regulations. The records are sufficient to demonstrate that the certification procedures have been effectively fulfilled, particularly with respect to application forms, evaluation reports, surveillance activities and other documents relating to granting, maintaining, extending, suspending or withdrawing certification. The records are identified, managed and disposed of in such a way as to ensure the integrity of the process and the confidentiality of the Information. The records will be kept for a period of time that ensures continued confidence can be demonstrated for at least one full certification cycle, or as required by law.
- 3.33.02 GreenTag has policies and procedures for retaining records for a period consistent with its contractual, legal or other obligations. The policy and procedures concerning access to these records is consistent with confidentiality agreements and requirements.

3.34 Development of Product Specific Requirements

Product Specific Category Rules (PCRs) are developed to consistently apply Functional unit, boundary conditions and methodologies for each product category they are developed for. Each existing or new PCR adopted sets out the rules for LCA- data collection, methodology, calculations and presentation of the results. PCRs will be created or modified based on the GreenTag PCR Development Process, including the following steps:

- Initiation and seeking co-operation with stakeholder and other interested parties;
- An open and effective consultation process and outcome during the preparation of the PCR documents
- Approval of PCR documents by both NAC and IEP groups before recommendations are provide to the Board;
- Annual Review and maintenance of validity of PCR documents;
- Reporting and publication of PCR documents via email notification and hosting on globalgreentag.com and other GreenTag websites as relevant public domain.

GLOBAL GREENTAG PRODUCT TECHNICAL STANDARDS

This Technical Standard Section relating to the overall certification and declaration programs are in 3 parts as represented by Sections 4.00, 5.00 and 6.00, where relevant, they may be undertaken together. However, the parts are separable and may be done independently or together.

4.0 LCARATE CERTIFICATION STANDARD

To be accepted for assessment under this standard a product must meet at least one of the following 2 criteria:

1. It must exhibit unique ecological or health preferred characteristics compared to business as usual (BAU) product in its product category performing the same essential function;

OR

2. Be a member of a category of products that is ecologically or health preferred compared to Business as usual (BAU) product performing the same essential function;

AND

3. Not create significant ecological or health impacts. This is defined as product that passes the ESCAP assessment processes (Shown in attached Appendix 1).

Once assessed and categorised under the ESCAP process, the product is required to demonstrate compliance to this LCA Rate Program and any other Product Category Specific Standards (Appendix 2).

4.1 GreenTag SAC Scores and Weightings

Legal Compliance – To be considered for LCARate Award Tiers Bronze through Platinum, Applicants are required to demonstrate Code compliance with country relevant, legal fit for purpose requirements, in accordance with clause 4.8 A.

Weightings: The 6 key LCA Rate Sustainability Assessment Categories (SACs) and weightings that comprise the performance pathway are as follows:

SAC1 =Integrated Design Synergy	– 10%
SAC2= Life-cycle Assessment –Greenhouse	– 20%
SAC3= Life-cycle Assessment –Health	– 20%
SAC4= Life-cycle Assessment –EcoPOINTS	– 15%
SAC5= Biodiversity –Physical impacts (non-LCA)	– 20%
SAC6= Corporate Social Responsibility	– 15%

Each SACs is allocated a possible score of 0-1, except SAC2, SAC 3, SAC 5 and SAC 6 which allow for scores to minus 1. Where -1 = Best Possible Positive Impact 0 = No Impact and 1 = Impact of Worst Case Business as Usual (BAU). Minus 1 = 100% Net Positive product in same functional purpose category. As per clause 4.7.2 iii) relevant SACs may extend beyond -1 for 'Net Positive' or "Blue Economy' products with multiple parallel or 'circular economy' benefits.

A product is assessed against each SAC and final scores calculated to 2 decimal places as follows:

LCA Rate Score (GreenTag EcoPoint) =

$$(SAC1 \times 0.1) + (SAC2 \times 0.2) + (SAC3 \times 0.2) + (SAC4 \times 0.15) + (SAC5 \times 0.2) + (SAC6 \times 0.15)$$

Products with lower scores are determined to be of lower impact and higher benefit.

4.2 Awarding LCARate Tier Levels

Products must meet any Supplementary Category Specific Standards as shown in Appendix 2.0, achieve the following GreenTag EcoPOINT scores and meet the ESCAP threshold criteria shown below (based on current process as shown in attached Appendix 1):

4.2.1 PLATINUM Award

An LCARate Platinum award is given to products that achieve a score of < 0.16 .

and product contains no added ESCAP Level 1 or Level 2 chemical ingredient/s except from natural/ trace contamination of raw materials allowing for ESCAP clause 6.8.4 exceptions.

Platinum is the highest level of achievement under the LCA Rate program and indicates a product is in the 'world leading' position of its market category. Discernment of the comparative performance of products within this (or any) Tier can be made by reference to the actual GreenTag Ecopoint score determined by the Assessment process;

4.2.2 GOLD Award

An LCARate Gold award is given to products that achieve a score of $\leq 0.44 > 0.16$.

and product triggers no ESCAP 'Issue of Concern' warnings due to added chemical ingredient/s post Risk Analysis allowing for ESCAP clause 6.8.4 exceptions.

A Gold award indicates a product 'excellent' in its market category

4.2.3 SILVER Award

An LCARate Silver award is given to products that achieve a score of $\leq 0.72 > 0.44$.

and product triggers no ESCAP 'Red Light' warnings- post Risk Analysis allowing for ESCAP clause 6.8.4 exceptions.

A Silver award indicates a product is 'very good' in market category

4.2.4 BRONZE Award

An LCARate Bronze award is given to products that achieve a score of > 0.72 .

and product passes the ESCAP assessment process allowing for ESCAP clause 6.8.4 exceptions.

A Bronze award indicates a product is 'good' in its market category and generally equivalent to other Type 1 Ecolabels.

The scores for each SAC can be interpolated between thresholds and each SAC is defined and assessed as follows:

4.3 SAC1 -Integrated Design Synergy (IDS)

Integrated Design Synergy is defined in this context as the process by which buildings and their systems beneficially interact with occupants or associated buildings processes providing enhanced outcomes, so that the integrated systems achieve a degree of synergy, not otherwise attainable, thereby reducing system or resource intensity of the overall project. This attained synergy should potentially lower costs or increase the overall value proposition without increasing costs proportionately. In the context of buildings, this can include additional savings or efficiencies in other building systems, elements or structure, energy, water, materials, waste/re-use, productivity, health, social outcomes etc., in first costs or operational costs.

Scoring: This Performance Category is assessed by evaluation of the number of buildings systems impacted and the degree to which they are impacted. The score for this category is derived via the IDS Matrix 1 below:

		Number of Building Systems/Elements Impacted				
		5	4	3	2	1
Significance of impact on one or more system , element or resource	Major >15%	0	0.25			
	Significant >10% ≤15%	0.25	0.5			
	Minor >5% ≤10%	0.5	0.75			
	Insignificant ≤5%	0.75	1.0			
	No synergy	1.0				

Matrix 1: Integrated Design Synergy Scores.

The determination of the performance category score can be assessed by several potential pathways:

- By simulation modelling using a relevant computer simulation software and climate zones; or
- By calculation: or by
- Expert estimation where the system assessment is straightforward and reasonably determined in this way;
- Computer simulation will be comparative, based on a standardised typical BAU building form and specification in category most relevant to product i.e. residential or commercial.

4.3.1 Climate or regional dependent outcomes:

Where results in this Performance Category are climate or regionally dependent, advisory notations and potential resulting ratings range will be included on the ratings label.

Where building synergy is not relevant (e.g in the case of a Fitout component or benign internal finish), this score is defaulted to 1.

4.4 SAC-2 Greenhouse Impacts

Greenhouse emissions are comprised of negative impacts from CO₂ and other greenhouse gas emissions as well as positive impacts from sink effects where the product or material comprises carbon bound up from the atmosphere (e.g. magnesia cements and wood).

The percentage carbon savings or sink is calculated by using LCADetail Software or other approved software and LCA methods as for SAC-4. Scores are calculated as follows:

- i. For products with a net sink effect Table 1 is used.
- ii. For products with GHG savings from BAU Table 2 is used;
- iii. For LCARate Bronze Only reduced scope (no LCA) products, the SAC2 score is defaulted to 1.

Table 1: Greenhouse Impacts Carbon Sinks

		Greenhouse Impacts- % Carbon Sink					Carbon Neutral
		>100 Sink	≤100 > 75	≤75 > 50	≤50 >25	≤25 >0	
Score		-1.0	-0.85	-0.65	-0.35	-0.15	0

Table 2: Greenhouse Impacts Carbon Emission Savings

		Greenhouse Impacts- % Carbon Emission Savings					Business as usual
		Carbon Neutral	<85<100	<75≤85	<50≤75	<25≤50	
Score	0	0.25	0.50	0.75	0.85	0.95	1

Scores are also interpolated in direct relationship to their actual performance.

These results are used for the CarbonRate scheme.

4.5 SAC-3 Life Cycle Assessment – Human Health (Toxicity)

All toxicity and health impacts are assessed in accordance with ESCAP as shown in Appendix 1 and subsequent versions which eliminates and restricts the following substances and impacts.

This section requires assessment under and compliance with the current version of ESCAP as it is upgraded from time to time and with any additional industry specific standards in Appendix 2.

Only if the Risk Analysis shows the risk is not likely to impact the environment, OH&S, or building users, may the product proceed to the full certification process.

Formaldehyde emissions of composite wood: must be in accordance with Formaldehyde requirements as shown in Appendix 2.

Scoring: The scoring for the LCA Human Health category is based on the ESCAP results and the Caution Assessment (if any) required to be issued as shown in Table 3 below.

ESCAP Toxicity Assessment								
	Zero Lvl. 1 or Lvl. 2 ESCAP Ingredients	Lvl.1<0.1% & Lvl. 2<1% ESCAP Ingredients	No Comment Post ESCAP	Lvl.1<0.5% & Lvl.2<5% with Issue of Concern Post ESCAP	Lvl.1≥0.5% & Lvl.2≥5% with Issue of Concern Post ESCAP	Lvl.1<1% & Lvl.2<10% with Red Light Comment Post ESCAP	Lvl.1≥1% & Lvl.2≥10% with Red Light Comment Post ESCAP	Red Light Exclusion Post ESCAP
Score	0	0.1	0.25	0.5	0.75	0.9	0.95	Excluded

Table 3: LCA Human Health Category Scores

Note: only if the product contributes to increasing healthiness or decreasing existing environmental ecotoxicity, the score of SAC-3 may score from 0 to -1.

The Human Health impacts considered under this category relate to emissions generated by product’s direct constituents. Diffuse health impacts generated by raw materials, manufacturing or disposal impacts are considered in 4.6 below.

4.5.1 VOC Requirements

To be considered for LCARate Award Tiers Platinum, Gold and Silver, VOC testing or declaration in accordance with relevant Supplementary Standards is required, with an exception of compounds mentioned in clause 8.10.2.

4.6 SAC-4 Life-cycle Assessment – LCA EcoPOINTS

The LCA is undertaken by use of commercially available LCA tools loaded with GreenTag proprietary database to assess the GreenTag LCA scores for SACs 2 and 4.

It calculates the many impacts using the LCI databases using complex algorithms derived by experienced LCA practitioners.

4.6.1 LCADesign for GreenTag:

This standard allows GreenTag assessments, to analyse whole-of-life impacts for products and provide individual detailed category results to be collated into a single weighted score using Eco-indicator99 or locally derived weightings.*

Life Cycle Inventory Development: GreenTag use an existing Australian National Life Cycle Inventory (LCI) database that is subject to ongoing enhancement and integration with BPIC Product Assessment Methodology and AusLCI data when available without economic allocations and data is appropriate. Databases for other countries are already licensed by the GreenTag contract LCI developer. Bespoke National LCI databases are required for other countries.

4.6.2 LCA EcoPOINT

An LCA EcoPOINT as defined by this Standard is the weighted results of the LCA analysis over the potential life of an eco-preferred building material, compared to a 'Business as Usual' or typical product used within the market, typically over a 60 year cycle of use in a building including maintenance, cleaning and replacement (as per typical life expectancy) and is a number between 0 and 1 with the lowest ecological and health impacts being a '0' score.

The LCA EcoPOINT score for a product used by GreenTag^{Cert™} is determined by product raw materials composition, manufacturing process and raw materials/component source country and includes any required fixing/s preparation and directly associated other components.

Ratings that have been determined by GreenTag or other recognised third party site audit will be recognised by the PLUS attribute.

The category life cycle impacts considered by the LCA EcoPOINT system includes but is not limited to:

- Energy and Fuel use;
- Water use;
- Air Pollution;
- Ozone Depletion;
- Human Health (impacts from emissions not generated by product's direct constituents);
- Ecosystem Quality;
- Eco-Toxins and Waste;
- Resource Depletion;
- Recycled content and
- Water Pollution.

The LCA EcoPOINT is used in the GreenTag^{Cert™} Assessment process to calculate the final GreenTag^{Cert™} Score used to determine the Tier Award during Certification. Where an LCA analysis is not available a score of 1 shall be used. Only Bronze Certified products can be scored without an LCA.

*Other LCA tools that deliver equivalent Eco-indicator 99 or locally derived weightings for the ecopoint and compliant GHG emission results as per SAC-2, may be used at the discretion of the Program Director subject to verification of compliance to the approved PCR and current LCA methodologies stipulated by the Program.

4.7 SAC-5 Biodiversity – Physical impacts (non-LCA)

LCA analysis does a detailed assessment of chemical and many other biodiversity impacts on ecosystems, however does not have highly developing indicators for biodiversity quality and physical biodiversity impacts. This SAC attempts to assess the aspects of LCA not adequately covered by the LCA process in SAC2.

The assessment of biodiversity impacts is split between timber based and non timber based products. Where a product contains timber and non-timber based products, final scores are calculated based on weighted average using Matrix 2 and Matrix 3, as below.

4.7.1 Timber based products

This PAC is aimed at ensuring the biodiversity issues relating to the extraction of timber are assessed via a proxy measure i.e. Certification. Matrix 2 is used for timber based products.

		% of Certified Timber
Rating Scheme Recognition	FSC 100% Chain of Custody (CoC)	0.05
	FSC Mix COC, PEFC Responsible Wood COC, CERES Fair Wood, Mixed% CoC (FSC/PEFC/Responsible Wood)	0.1
	FSC Controlled Wood	0.15
	Certified legally sourced Wood	0.5
	Uncertified or Non COC Plantation Wood	1.0
	Uncertified wood sourced from remnant Native forests	Excluded from Certification

Matrix 2: Timber, timber-based or timber containing product assessment scores

Global GreenTag has a standardized method to calculate the SAC-5 score of timber-based products. When there is more than one wood type, a pro rata mathematical proportional method is applied to calculate the score.

Controlled wood is defined as ‘controlled to avoid sourcing illegally harvested wood, wood harvested in violation of traditional and civil rights, wood harvested in forests where high conservation values are threatened by management activities, wood harvested in forests being converted to plantations or non-forest use and wood from forests in which genetically modified trees are planted’ (FSC-STD-30-010 V2-1 EN 2006).

Note: As for high conservation value forest sourced wood, even if it comes with legal certificate, Global GreenTag reserves the right to exclude it from the certification subject Global GreenTag’s own investigation.

4.7.2 Non timber based products

This PAC is aimed at the physical biodiversity issues relating to Non-timber based products and components extraction and disposition. Matrix 3 below is used for predominantly non timber based products.

		Extent of Biodiversity Impact				
		Site	Local	Regional	National	Global
Significance of Biodiversity impact	Insignificant	0		0.25		
	Minor	0.25			0.5	
	Significant	0.5	0.75		1.0	
	Major	0.75	1.0			

Matrix 3: Non Timber-based product assessment scores

- i) **Combinations of sources:** Where a product is comprised of different materials, each raw material or source of impact is assessed individually and the final scores are determined in direct proportion to the mass of each constituent in the Product. If the extent of biodiversity impacts cannot be quantified, then a score of 0.5 is added.

This Matrix constitutes the entire product score for all products containing 90% or more non timber constituents. For products containing less than 90% non timber constituents, the weighted average score based on percentage by weight of each type of component (timber, non-timber) using scores from both Matrix 2 and Matrix 3 applies.

- ii) Where the product, material component or manufacturing process reduces impacts on biodiversity, such as product containing post-industrial content, this relevant percentage of the product by weight shall be attributed a score of **0**. Where the product, material or manufacturing process provides potential for net positive biodiversity, these positive impacts to biodiversity will be proportionally attributed a negative score using the same process and absolute values in Matrix 3 above, relevant to the extent and significance of the impact. For example, if product contains post-consumer recycled content, this relevant percentage of the product by weight shall proportionally attributed a correspondently negative score.
- iii) If a product provides benefit of more than 100% i.e. its impacts are 'Net Positive', then multiples of those 100% can go beyond -1 and the scores are attributed proportionally.

4.7.2.1 Palm Oil

Products that use palm oil or palm oil derived ingredients in products under certification must be either certified sustainable palm oil (CSPO) or, certified sustainable palm kernel oil (CSPKO) (www.rspo.org), or fully offset through the GreenPalm program (www.greenpalm.org) certified under programs including:

- a. Roundtable on Sustainable Palm Oil (RSPO) and RSPO Supply Chain Certification; see www.rspo.org
- b. GreenPalm Certification; see www.greenpalm.org

Products listed as containing generic terms like ‘vegetable oil’ must declare whether there is any palm oil or palm kernel oil present in their constituents;

Recognising that for some components the source of fatty acids is easily and often interchanged and from diverse sources, hence the source of minor components may not be able to be tracked. Therefore products may not contain more than the following percentages of unidentified active components that may be derived from palm oil to be accepted for certification at:

- 5% - Bronze Level
- 2.5% - Silver Level
- 0.1% - Gold Level
- 0% - Platinum Level

Furthermore, Platinum certified products will be required to use either no palm oil or derivatives or use 100% identified sources and 100% CSPO or CSPKO products at any time and shall only contain palm or palm kernel oil that has been certified organic or third party certified not to have used paraquat or compounds nominated in the World Health Organisation Class 1A or 1B categories, or those listed by the Stockholm or Rotterdam Conventions in their supply chains.

4.7.3 Data Sources:

By the nature and dispersal of biodiversity impacts, they are inherently hard to quantify unless detailed site-based studies and full impact assessments have been done. In many cases this data may be available e.g. for Licensing Authorities, and where it is, this information will be sourced and used in the assessment. Where this level of data is not available, a literature review will be undertaken and generic, industry wide data used in a qualitative assessment process.

Threats to the following categories of flora or fauna (as assessed by any recognised Government or NGO body) will be assessed as follows:

Threatened	Significant
Rare and/or Endangered	Major
Threatening Process	Significant or Major

Score to be attributed based on extent of impact using Matrix 3.

4.8 SAC-6 Corporate Social Responsibility

A. Legal Compliance:

For any certification levels, Applicants and Manufacturers/Assemblers are required to demonstrate compliance with relevant social and environmental legislative or other legal requirements.

B. Corporate Policy:

Applicants are required to provide evidence of a Corporate Social Responsibility Policy that demonstrates the organization considers the impact of its activities on the environment, consumers, employees, communities, and all other members of the public sphere during corporate decision-making.

C. Ethical Labour Practices:

Applicants and Tier 1 suppliers are required to demonstrate social compliance to International Labour Organisation (ILO) conventions (at a minimum):

- Freedom of Association and Collective Bargaining (Conventions 87 and 98);
- Elimination of Forced and Compulsory Labour (Conventions 29 and 105);
- Worst Forms of Child Labour (Convention 182)
- Minimum Age (Convention 138)
- Elimination of Discrimination in respect of employment and occupation (Conventions 100 and 111);
- Occupational Safety and Health (Convention 155) and its accompanying Recommendation No 164; and
- Occupational Health Services (Convention 161) and its accompanying Recommendation No 171

OR

Compliance to Social/Ethical Guidelines SA 8000. The requirements of SA 8000 *in addition* to those shown above are shown below:

- ILO Convention 1 (Hours of Work – Industry) and Recommendation 116 (Reduction of Hours of Work)
- ILO Convention 102 (Social Security – Minimum Standards)
- ILO Convention 131 (Minimum Wage Fixing)
- ILO Convention 135 (Workers’ Representatives)
- ILO Convention 138 and Recommendation 146 (Minimum Age)
- ILO Convention 159 (Vocational Rehabilitation and Employment - Disabled Persons)
- ILO Convention 169 (Indigenous and Tribal Peoples)
- ILO Convention 177 (Home Work)
- ILO Convention 183 (Maternity Protection)
- ILO Code of Practice on HIV/AIDS and the World of Work
- Universal Declaration of Human Rights
- The International Covenant on Economic, Social and Cultural Rights
- The International Covenant on Civil and Political Rights
- The United Nations Convention on the Rights of the Child
- The United Nations Convention on the Elimination of All Forms of Discrimination Against Women
- The United Nations Convention on the Elimination of All Forms of Racial Discrimination

OR

Use ISO 26000 Social Responsibility as a guideline.

D. Modern Slavery Statement (Company Level):

Prerequisite: Applicants are required to provide a copy of their Modern Slavery Policy when required by national or State Legislation in any country where they identify and assess the risk of modern slavery practices in the supply chain of the Product and identify and implement strategies to mitigate those risks or the program to which they are operating to prepare the requisite Policy and Modern Slavery Report.

Global Greentag Modern Slavery Report (Product Level) requires compliance with Section C and extends to supply chain risk analysis.

E. Public Reporting:

Applicants or Manufacturer/Assembler are required to have public reporting in accordance with the Global Reporting Initiative (GRI) as a minimum on: Environment, Human Rights and Labour.

F. Environmental Claims:

Applicants and Manufacturer/Assembler’s public claims on products’ environmental performance are verified as compliant with ISO 14021 ‘Environmental Labels and Declarations - Self-Declared Environmental Claims’ (Type II Environmental Labeling) requirements.

G. Product Stewardship Program:

Applicants and/or manufacturer/assembler of the certified products or materials to have a product stewardship program in place. This program shall be publicly available and entail providing contractual arrangements with their customers to take products back at the end of the product’s in-use phase for some form of refurbishment and reuse, or recycling as deemed appropriate for the relevant product specific use and purpose.

H. Social or Ecological Restorative Program Participation:

Applicants are required to substantially and actively participate in, or create socially beneficial programs within socially deprived communities or environmentally beneficial programs engaged in restorative practices or conservation of high conservation value ecosystems. The impacts of these programs can also be counted under SAC 3.

I. Local Procurement:

Applicants or manufacturer/assembler are required to comply with the SAC assessment as described below and 9.16 Local procurement’ supplementary standard.

Score awarded is determined by subtracting points for each criteria achieved from the base score of 1. To align with the ‘Net Positive’ intentions of this standard, the product scores ranges from -1 to +1. Scores are awarded, when it is deemed by the certified that a significant effort has been made towards ecological restoration or at redressing existing social disadvantage or inequity. Number of points subtracted for each criteria are shown below in Matrix 4 as follows:

Legal Compliance	Mandatory
Corporate Social Responsibility Policy	= 0.1
Ethical Labour Practice:	
ILO Compliant Supply Chain	= 0.15
ILO Compliant Supply Chain – Third Party Certified	= 0.20
Modern Slavery Product Level Statement	=0.15
SA 8000 Compliance	= 0.30
Public Reporting	= 0.25
Environmental Claims	= 0.25
Product Stewardship Program:	
Applicants being responsible for cost	= 0.25
Applicants taking any brand’s product back	= 0.25
Where an operational PSP can be proven	= 0.25
Social Restorative Program	= up to 0.5
Ecological Restorative Program	= up to 0.5
Local Procurement	= up to 0.5

Matrix 4: Corporate Social Responsibility Score Assessment

SAC Assessment

Legal Compliance:

The following documentation is required to demonstrate compliance for this criterion. The documents are to be provided by both Applicant as well as Manufacturers/Assemblers.

- Signed declaration from the CEO, CFO or an Executive officer of the organization to confirm that the company complies with all relevant Australian (or the Country of Operation specific) social and environmental legal requirements
- Documents for any relevant permits granted by Environmental Protection Authority (EPA) or equivalent national, state or local authority
- If Applicant or Manufacturers/Assemblers were found guilty of breach of any Environmental or social legislation or permits within last 5 years, a description of the non compliance and evidence of the corrective actions to be submitted.

Corporate Policy:

In order to achieve the credit points for this criterion, Applicants are required to submit their Corporate Social Responsibility Policy. This policy must be publicly available on their website.

Ethical Labour Practices:

This credit is aimed to address social equity and its compliance for Applicant Company, Manufacturer/Assembler and its Tier 1 suppliers.

NOTE: Brokers, distributors, inventory management providers, etc are not counted towards this credit; however, assessments may be passed through them to qualifying suppliers.

Applicant Company must give a list of their 'product and its ingredient' suppliers to Global GreenTag. Global GreenTag will determine Tier 1 suppliers.

The product achieves the credit by fulfilling one of the two options below:

Option 1: Self assessed supplier assessment

All Tier 1 suppliers that contribute to product's mass by more than 1% must submit **self assessed** supplier assessments. The assessments must address how they comply with ILO conventions mentioned above in the criteria at a minimum. The assessments must be signed by the CEO, CFO or an Executive Officer of the qualifying supplier company.

Manufacturer/Assembler must also complete an assessment that is signed by the CEO, CFO or an Executive Officer.

All qualifying Tier 1 Suppliers, Applicant and Manufacturer/Assembler must also demonstrate Legal compliance through signed declaration by the CEO, CFO or an Executive Officer.

Option 2: GGT verified supplier assessment

The majority of GGT determined Tier 1 suppliers must comply with ILO conventions mentioned above in the criteria at a minimum.

The majority is defined as:

At least 51% of Tier 1 suppliers which contribute more than 1% of total product mass **AND** complying Tier 1 suppliers must make up at least 51% of total product mass.

The supplier declaration must be signed by the CEO, CFO or an Executive Officer of the qualifying supplier company as well as all evidence must be provided to demonstrate compliance to this credit.

Manufacturer/Assembler must also complete a declaration that is signed by the CEO, CFO or an Executive Officer and provide evidence that demonstrates compliance to this credit.

Qualifying Tier 1 Suppliers, Applicant and Manufacturer/Assembler must also demonstrate Legal compliance through signed declaration by the CEO, CFO or an Executive Officer.

Modern Slavery Product Level Reporting;

Assembler/Manufacturer must comply with the requirements of the Modern Slavery assessment, in addition to complying to its legal requirement for Modern Slavery reporting under National and State Legislation as well as compliance under Option 1 or Option 2 for Ethical Labour Practices described above.

SA 8000 or ISO 26000:

Assembler/Manufacturer or Applicant must provide an Audit Report showing compliance with the Social/Ethical Guidelines – Whole-of-enterprise compliance with SA 8000.

OR

Assembler/Manufacturer or Applicant must provide a Report showing compliance with ILO conventions mentioned above using ISO 26000 Social Responsibility as a guideline.

Public Reporting:

GRI Report must cover minimum of Environment, Human Rights and Labour in order to achieve this criterion.

Environmental Claims:

Report or declaration from Applicant as well as Manufacturer/Assembler stating that all publicly stated environmental claims for the product are compliant to ISO 14021.

A signed declaration from CEO, CFO or an Executive officer of the company (both Applicant as well as Manufacturer/Assembler) stating that any product related environmental claims made by the company in future will be verified using ISO 14021.

Product Stewardship Program:

Applicants or Manufacturer/Assembler is to demonstrate that necessary arrangements are in place to deliver the claims of the product stewardship program. They can demonstrate via submitting contractual agreements between the Applicant and/or supplier, wholesaler or retailer with third party recyclers, transport companies, charities, second-hand retailers and refurbishment companies.

The points are awarded based on 3 criteria:

- Applicants being responsible for cost
- Applicants taking any brand's product back
- Where an operational PSP can be proven

Social or Ecological Restorative Program Participation:

In order to achieve recognition for this criterion, Applicants must demonstrate their substantial and active participation in social or ecological restorative programs.

Social or Ecological Restorative Program must be an integrated part of company strategy. Applicants are required to submit documentation such as company plans, corporate policy, company strategies, purchasing receipts, donation receipts, local employment, local procurement, or any such documents that can demonstrate substantial and active participation. Contributions made both financially or in kind or via other means when demonstrated and accepted by GreenTag will be considered. It will be assessed based on the percentage of dollars or in kind equivalent value spent yearly compared to turnover of the company.

To achieve this score compliance with **Corporate Policy** is required as a minimum.

Local Procurement:

Australia: If Australia is the country of origin of each significant ingredient/component in the product (as defined in section 255 of the Australian Consumer Law) and all (or virtually all) processes involved in the production/manufacturing of the product are within Australia (as defined in section 255 of the Australian Consumer Law), **OR** is certified by Australian Made® as “*Product of Australia*” or “*Australian Product*” then the product achieves full score i.e. **0.5**.

The scoring of this credit is calculated based on the actual contribution to Local Procurement as per supplementary standard 9.16 Local Procurement.

South Africa: In order to achieve the recognition for Local Procurement supplementary standard, the manufacturing or assembling facility of the Product must be located in South Africa.

The scoring of this credit is calculated based on the actual contribution to Local Procurement as per supplementary standard 9.16 Local Procurement.

International: If the country the certification is intended for is the country of origin of each significant ingredient/component in the product and all (or virtually all) processes involved in the production/manufacturing of the product are within that country, then the product achieves full score i.e. **0.5**.

The scoring of this credit is calculated based on the actual contribution to Local Procurement as per supplementary standard 9.16 Local Procurement.

4.9 PLUS Ratings

PLUS level Assessment requires manufacturer and product specific audited life cycle inventory. The LCI is required to be relevant to the Applicant product and processes, manufacturing plant/s, administrative procedures and/or supply chain as required by the Program Director to determine the compliance with this Standard. Once approved at audit the designator PLUS will be included in the awarded Series Mark.

LCARate Process Diagram

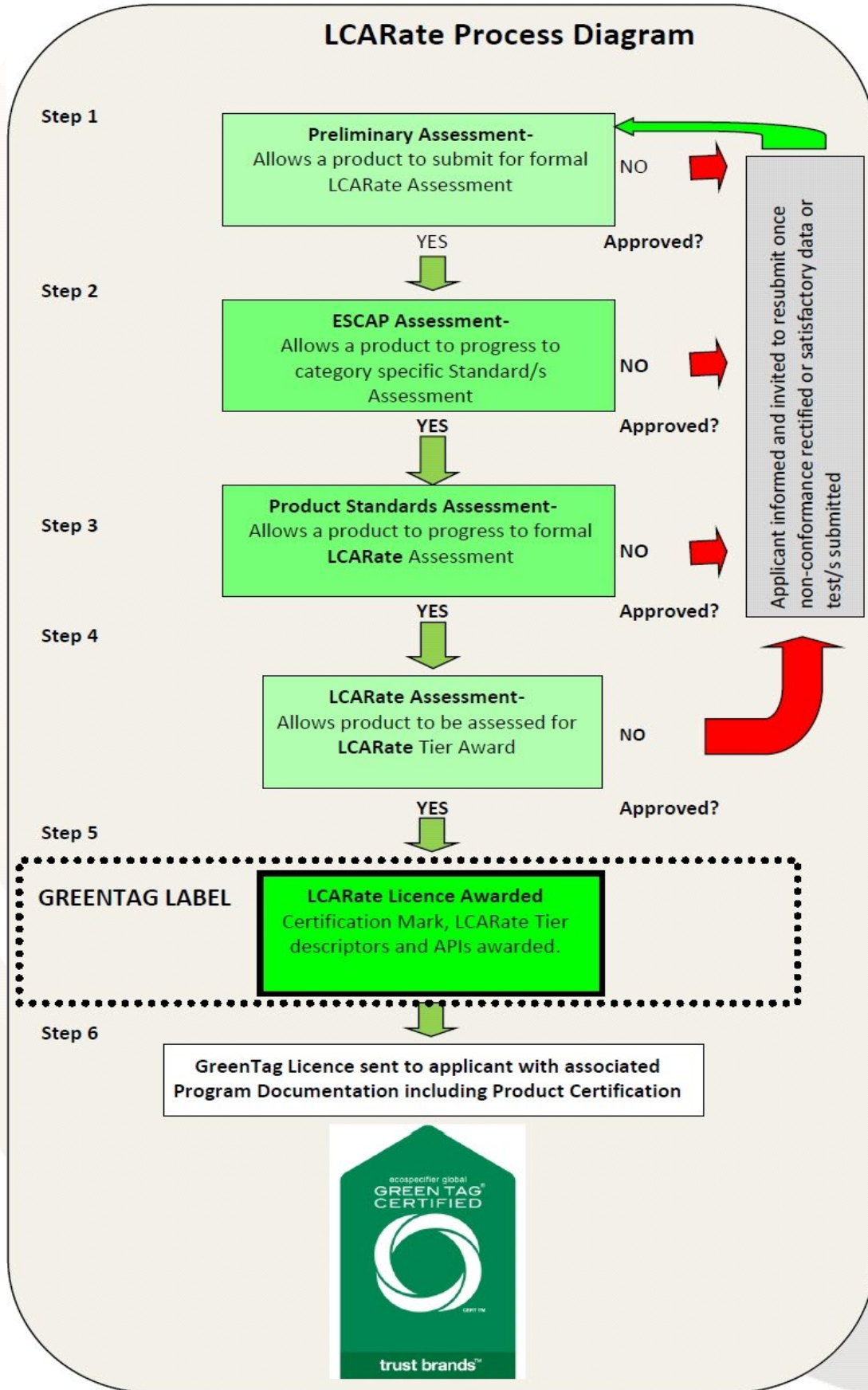


Figure 3: LCARate Certification Process Diagram

5.0 GREENRATE CERTIFICATION STANDARD

This Technical Standard Section relating to the certification program is in 2 parts as represented by Sections 4.00 and 5.00, where relevant, the two may be undertaken together. However, the two parts are separable and may be done independently or together.

Various bodies locally and internationally publish Green Project Rating Schemes. This section is intended to cover assessment of products specifically as they relate to compliance with specific credits or issues within these various schemes including but not limited to: Green Star, Green Star NZ, Green Star SA, Living Building Challenge, the Infrastructure Sustainability Rating Tool, EnviroDevelopment, HomeStarNZ, My HIJAU and GBI (Malaysia) and EarthCheck.

This Standard is intended to be relevant to any country based on recognised Green or Healthy Building Rating Scheme/s and may be subject to the approval of a Scheme Specific Annexure by the Scheme owner.

The Green Building Council of Australia (GBCA) publishes the Green Star® Range of building sustainability rating tools including various Technical Manuals and recognises Product Assessment Bodies with Multi-Criteria Product Certification Schemes against its Standard for Third Party Product Assessors.

Aspects of the GreenTag^{Cert™} GreenRate Standard have been developed in response to the requirements of the GBCA's 'Assessment Framework for Multi-Criteria Product Certification Schemes' (GBCA Framework) and will be assessed by GBCA for conformity separately to ASIC/ACCC assessment.

GreenTag^{Cert™} GreenRate recognises Green Star recognised ecolabel equivalency for 1 year currency.

Assessment criteria for the other Schemes above are based on the specific technical requirements of those Schemes.

The following sections comprise the approved GBCA Green Star™ 3rd Party Certification Scheme Accredited GreenRate Process for assessment of credit points for products relevant to the various Materials Calculator credits:

5.1 Technical Standards relevant to Green Star Materials Calculators

The GBCA Framework addresses a number of Priority Areas of Concern (PACs). This section of the Standard addresses those PACs as follows:

5.1.01. PAC 1 Greenhouse Gas Accounting

This Standard requires measurement of Greenhouse gas footprints to be generated in accordance with:

- I. ISO 14067:2013 (Greenhouse gases – Carbon Footprint of products – Requirements and guidelines for quantification and communication)
OR
- II. PAS 2050:2008 (BSI-Specification for the assessment of the life cycle greenhouse gas emissions of goods and services)
OR
- III. Public Reporting of comprehensive product life cycle greenhouse gas footprint based on a per functional unit basis is required in accordance ISO 14040:2006 (Environmental Management – Life cycle assessment – Principles and framework) and ISO 14044:2006 (Environmental Management – Life cycle assessment – Requirements and guidelines) and ISO 14067:2013 subject to the need to demonstrate compliance with this PAC and performance requirements

as required in Matrix 5 below.

It also requires public reporting of comprehensive product life cycle greenhouse gas footprint based on a per functional unit basis. Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules (PCRs) for selected products or the creation of new PCR's (in accordance with the GreenTag EPD Program Rules for Operation. Certified products' greenhouse emissions will be published on GreenTag website/s as a minimum to fulfill this requirement.

PAC Assessment:

Applicants can achieve this criterion by Life Cycle Analysis as per GreenTag Procedure 1: LCA Analysis as required in accordance with performance requirements in Matrix 5 below.

OR

By submitting EPDs compliant with ISO 14025 or EN 15804 or ISO 21930 that reports on GHG results.

5.1.02. PAC- 2 Toxicity

All toxicity and health impacts are assessed in accordance with ESCAP as shown in Appendix 1 and any Supplementary Product Category Standards shown in Appendix 2.0 which together eliminates and restricts the following substances and impacts. This Standard:

Generally: Certification to levels A, B and C requires compliance to the most current version of ESCAP, as it is upgraded from time to time. Subject to the ESCAP risk analysis process, Certified Products must not contain any more than 1% of a Level 2 (Medium-Low Risk) agent and comply with Supplementary Product Category Standards shown in Appendix 2.0. Only if the Risk Analysis shows the risk is not likely to impact the environment, OH&S, or building users, may the Product proceed to undergo certification.

See ESCAP & EU Directive (EC) 1272/2008 Annex 1 Table 1.1 .on page 57 this is a UN Globally Harmonised System compliant regulation.

Carcinogens: restricts user exposure to substances to less than the NOAEL/NOAEC or zero if NOAEL is unknown.

Toxic Substances: limits exposure to acutely toxic substances, toxic substances (or requires Applicant/Supplier to meet a well documented and justifiable industry specific benchmark for material toxicity), heavy metals – (as a minimum arsenic, cadmium, chromium, copper, lead, tin, mercury and antimony).

Hazardous chemicals: restricts or bans the use of the following hazardous chemicals as they apply to the standard's relevant product group:

- persistent organic pollutants (POPs) and Substances of Very High Concern (SVHCs)
- Endocrine Disrupters
- Mutagens and Teratogens
- Bio-accumulative chemicals
- Irritants and sensitizing agents

via the analysis of a fully detailed list of constituents at an appropriate level of detail relevant to the level of toxicity of the constituent compounds.

Note: ESCAP excludes any product to be certified from containing any materials contained within Annex III of the Rotterdam Convention and Stockholm Convention and prohibits or restricts relevant agents in the OSHA List of Highly Hazardous Chemicals, Toxics and Reactives.

ESCAP also excludes or restricts the inclusion and/or release of agents carrying the following R-phrases: R26-28 and R50-59 or their equivalent H statements.

SVHCs: ESCAP excludes any product to be certified that contains constituents that are classified as Substance of Very High Concern (SVHC) and listed under Authorisation or Candidate List.

Formaldehyde emissions of composite wood: must be in accordance with the 'Formaldehyde Minimisation' Credit published in the various GBCA Green Star Technical Manual credit criteria or local schemes as relevant. See Supplementary Category Standard.

PAC Assessment: ESCAP assessment and compliance in accordance with Appendix 1: The Cautionary Assessment Process – ESCAP v.10

Applicants are required to provide a full declaration of substances down to 0.01% by weight for each homogenous material used in the final product (or further such more detailed requirements as may be required by sector specific or Supplementary Standards) and their relevant MSDS.

Applicants can provide evidence or a statement from a credible third party confirming an ISO 14001 compliant Environmental Management System *or equivalent* demonstrating the gathering of data on toxics usage and generation in a format that allows for tracking of all toxics purchased or generated with the aim of elimination of toxics in the production process, along with a commitment to continuous improvement. Any other suitable documents can be provided as evidence to safe handling of toxic chemicals.

For African Products a basic environmental management system at the factory must be in place.

5.1.03. PAC-3 Material Extraction

Data Collection: Applicants are required to gather data on material usage and waste generation of raw materials in a format that allows optimisation of the production process, along with a commitment to optimise the production process subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below.

Material Use Optimisation Options: Optimise materials sourcing and production processes to reduce negative environmental impacts from materials sourcing, use and disposal from at least one of the following:

- a. Use of 20% or more post consumer recycled materials or components;
 - Level A = 50 %, Level B= 20%, Level C = not required
- b. Sourcing 20% or more materials from rapidly renewable resources;
 - Level A = 50%, Level B= 20%, Level C = not required
- c. Reduction by 20% or more waste generated in the manufacturing process or incorporating 20% or more waste back into the production process (compared to industry average waste generation);
 - Level A = 50%, Level B= 20%, Level C = not required
- d. Dematerialisation of 20% or more defined as reduction of primary inputs by mass as a result of product design strategy;
 - Level A = 50%, Level B= 20%, Level C = not required
- e. Minimising 20% or more harmful sourcing, farming or habitat destroying practices by the use of practices that have a minimal or neutral impact on land use, biodiversity and soil erosion (maybe demonstrated by LCA or Certification under other National and International Ecolabels).
 - Level A = 50%, Level B= 20%, Level C = not required

PAC Assessment:

Mandatory Requirement:

Applicants are required to provide evidence or a statement from a credible third party confirming an ISO 14001 compliant Environmental Management System *or equivalent* demonstrating the gathering of data on material usage and waste generation in a format that allows optimisation of the production process, along with a commitment to continual improvement in the production process. Data collection and analysis process in accordance with GreenTag Procedure 2: EMS Review as per the requirements in Matrix 5 below.

Material Use Optimisation Options:

To achieve this criterion, Applicants must fulfill one of the following options:

- a. **Post Consumer Recycled Content:** If Product contains post consumer (PC) recycled content, Applicant must provide following evidence:
 1. A percentage breakdown of the Product indicating the percentage of PC recycled content by weight of the final Product.
 2. A declaration from the PC recycled content material supplier stating the source of the recycled content is post consumer
 3. Purchase invoices for the PC recycled content material indicating the total annual purchase volume and the total annual production volumes of finished Products.
- b. **Rapidly Renewable material:** If Product contains materials which have a harvest cycle of 10 years or fewer (e.g. bamboo, agrifibres or agriproducts, corn, cotton, natural rubber etc) then they are applicable for this criterion. Applicants must provide following evidence:
 1. A percentage breakdown of the Product indicating the percentage of rapidly renewable material by weight of the final Product.

- c. **Reduction of waste:** This optimisation option relates to the reduction of manufacturing wastes in order to divert the overall waste from landfill to alternative processing streams or to re-use in the Product. Applicants must provide following evidence:
1. A comparative analysis of past production methods with the current methods indicating the volume or mass of waste generated during the production process
 2. New waste handling program demonstrating the reuse of waste generated in the final Product or reused in alternative processing streams
 3. A breakdown of the Product indicating the percentage of the waste used by weight in the final Product, if applicable.
- d. **Dematerialisation:** This optimisation option relates to the concept of reducing the quantity of raw materials used without affecting the functional purpose of the Product. Applicants are required to provide following evidence:
1. A case study or report which identifies the design initiatives, the amount of material reduction expressed as percentage by mass, and supporting evidence that the Product upholds equivalent performance characteristics as traditionally designed Products.
- e. **Minimising harmful sourcing:** This optimisation option relates to minimising impacts on land use, biodiversity and soil erosion by minimising the use of conventional harmful sourcing practices. Applicants are required to provide following evidence:
1. Where Product uses timber, a valid copy of FSC or PEFC or AFS certificate must be provided
 2. A third party report or company's Research and Development report demonstrating that the current practice of sourcing is minimising the impacts on land use, biodiversity and soil erosion as much as possible
 3. Can also be demonstrated by LCA or Certification under other National and International Ecolabels

5.1.04. PAC-4 Water

Water Use Accounting- Public reporting of comprehensive product life cycle water footprint based on a per functional unit basis is required in accordance with:

- (i) ISO 14040:2006 (Environmental management - Life cycle assessment - Principles and framework) and ISO 14044:2006 (Environmental management - Life cycle assessment - Requirements and guidelines)
- OR
- (ii) ISO 14046:2014 (Environmental Management – Water Footprint – Principles, requirements and guidelines)

subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below.

Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules (PCRs) for selected products or the creation of new PCR's (in accordance with the GreenTag EPD Program Rules for Operation).

PAC Assessment:

Applicants can achieve this criterion by Life Cycle Analysis as per GreenTag Procedure 1: LCA Analysis as per Matrix 5 below.

OR

By submitting EPDs compliant with ISO 14025 or EN 15804 or ISO 21930 that reports on water accounting results.

5.1.05. PAC-5 Social and Environmental Compliance

Legal Compliance:

For any certification levels, Applicants and Manufacturers/Assemblers are required to demonstrate compliance with relevant social and environmental legislative or other legal requirements.

Compliant Supply Chain:

Applicants and Tier 1 suppliers are required to demonstrate social compliance to International Labour Organisation (ILO) conventions (at a minimum):

- Freedom of Association and Collective Bargaining (Conventions 87 and 98);
- Elimination of Forced and Compulsory Labour (Conventions 29 and 105);
- Worst Forms of Child Labour (Convention 182)
- Minimum Age (Convention 138)
- Elimination of Discrimination in respect of employment and occupation (Conventions 100 and 111);
- Occupational Safety and Health (Convention 155) and its accompanying Recommendation No 164; and
- Occupational Health Services (Convention 161) and its accompanying Recommendation No 171

Modern Slavery Statement (Company Level):

Prerequisite: Applicants are required to provide a copy of their Modern Slavery Policy when required by national or State Legislation in any country where they identify and assess the risk of modern slavery practices in the supply chain of the Product and identify and implement strategies to mitigate those risks or the program to which they are operating to prepare the requisite Policy and Modern Slavery Report.

Global Greentag Modern Slavery Report (Product Level) requires compliance with Compliant Supply Chain and extends to supply chain risk analysis.

Local Procurement:

Applicants or manufacturer/assembler are required to comply with '9.16 Local procurement' supplementary standard.

Public Reporting:

Applicants or Manufacturers/Assemblers are required to have public reporting in accordance with the Global Reporting Initiative (GRI) as a minimum on: Environment, Human Rights and Labour.

Environmental Claims:

Applicants and Manufacturer/Assembler's public claims on products' environmental performance must be verified as compliant with ISO 14021 'Environmental Labels and Declarations - Self-Declared Environmental Claims' (Type II Environmental Labelling) requirements.

SA 8000 or ISO 26000:

Demonstrate Compliance to Social/Ethical Guidelines – Whole-of-enterprise compliance with **SA 8000** or use **ISO 26000** Social Responsibility as a guideline.

PAC Assessment:**Legal Compliance:**

The following documentation is required to demonstrate compliance for this criterion. The documents are to be provided by both Applicant as well as Manufacturers/Assemblers.

- Signed declaration from the CEO, CFO or an Executive officer of the organization to confirm that the company complies with all relevant Australian (or the Country of Operation specific) social and environmental legal requirements
- Documents for any relevant permits granted by Environmental Protection Authority (EPA) or equivalent national, state or local authority
- If Applicant or Manufacturers/Assemblers were found guilty of breach of any Environmental or social legislation or permits within last 5 years, a description of the non compliance and evidence of the corrective actions to be submitted.

Compliant Supply Chain:

This credit is aimed to address social equity and its compliance for Applicant Company, Manufacturer/Assembler and its Tier 1 suppliers.

NOTE: Brokers, distributors, inventory management providers, etc are not counted towards this credit; however, assessments may be passed through them to qualifying suppliers.

Applicant Company must give a list of their 'product and its ingredients' and all suppliers to Global GreenTag. Global GreenTag will determine Tier 1 suppliers.

The product achieves the credit by fulfilling one of the two options below:

Option 1: Self Assessed Supplier Assessment

All Tier 1 suppliers that contribute to product's mass by more than 1% must submit **self assessed** supplier assessments. The assessments must address how they comply with ILO conventions mentioned above in the criteria at a minimum. The assessments must be signed by the CEO, CFO or an Executive Officer of the qualifying supplier company.

Manufacturer/Assembler must also complete an assessment that is signed by the CEO, CFO or an Executive Officer.

All qualifying Tier 1 Suppliers, Applicant and Manufacturer/Assembler must also demonstrate Legal compliance through signed declaration by the CEO, CFO or an Executive Officer.

Option 2: GGT verified Supplier Assessment

The majority of GGT determined Tier 1 suppliers must comply with ILO conventions mentioned above in the criteria at a minimum.

The majority is defined as:

At least 50% of Tier 1 suppliers which contribute more than 1% of total product mass **AND** complying Tier 1 suppliers must make up at least 50% of total product mass.

The supplier declaration must be signed by the CEO, CFO or an Executive Officer of the qualifying supplier company as well as all evidence must be provided to demonstrate compliance to this credit.

Manufacturer/Assembler must also complete a declaration that is signed by the CEO, CFO or an Executive Officer and provide evidence that demonstrates compliance to this credit.

Qualifying Tier 1 Suppliers, Applicant and Manufacturer/Assembler must also demonstrate Legal compliance through signed declaration by the CEO, CFO or an Executive Officer.

Modern Slavery Product Level Reporting;

Assembler/Manufacturer must comply with the requirements of the Modern Slavery assessment, in addition to complying to its legal requirement for Modern Slavery reporting under National and State Legislation as well as compliance under Option 1 or Option 2 for Ethical Labour Practices described above.

Local Procurement:

The Product must comply with the requirements as set in 9.16 Local Procurement Supplementary Standard.

Public Reporting:

GRI Report must cover minimum of Environment, Human Rights and Labour in order to achieve this criterion.

Environmental Claims:

Report or declaration from Applicant as well as Manufacturer/Assembler stating that all publicly stated environmental claims for the product are compliant to ISO 14021.

A signed declaration from CEO, CFO or an Executive officer of the company (both Applicant as well as Manufacturer/Assembler) stating that any product related environmental claims made by the company in future will be verified using ISO 14021.

For Local Procurement, sourcing claims for the product must also be compliant to ISO 14021. A signed declaration from CEO, CFO or an Executive officer of the company (Applicant) stating that any product related environmental and sourcing claims made by the company in future will be verified using ISO 14021.

SA 8000 or ISO 26000:

Assembler/Manufacturer or Applicant must provide an Audit Report showing compliance with the Social/Ethical Guidelines – Whole-of-enterprise compliance with SA 8000 if required in accordance with performance requirements in Matrix 5.

OR

Assembler/Manufacturer or Applicant must provide a Report showing compliance with ILO conventions mentioned above using ISO 26000 Social Responsibility as a guideline.—

5.1.06. PAC-6 Durability

- a. **Fitness for Purpose** – products certified for Levels A, B and C are required to demonstrate compliance with relevant national fitness for purpose standards as noted in the relevant Supplementary Category Standards.
- b. **Replacement Parts** – replacement parts are required to be available to extend the useful life of the product (where relevant).

PAC Assessment:

Applicants are required to provide following evidence:

- a. **Fitness for Purpose** – Products are required to provide current certificates or test reports from relevant organisations relating to appropriate Standards for the purpose or purposes of the Product relevant to the specific country for which the assessment is being undertaken e.g. for Australia: National Construction Codes (NCC), Building Code of Australia (BCA), Australian Standards (denoted AS-NZS), the Australian Furniture Research & Development Institute (AFRDI) Blue Tick Product Certification, the Carpet and Rug Institute Australian Carpet Classification Scheme (ACCS), BIFMA, etc
- b. **Replacement Parts** – A declaration signed by CEO, CFO or an Executive officer of the company stating that the replacement parts are available in the country of use for the minimum warranty period or replacement parts clause included in the Product warranty.

Data collection and analysis process in accordance with GreenTag Durability Assessment -Procedure 3.

5.1.07. PAC-7 End of Life

Subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below this PAC requires:

- a. **Product Stewardship Program** – This Standard requires all Applicants and/or suppliers of certified products or materials to have a product stewardship program in place. This program shall be publicly available and entail providing contractual arrangements with their customers to take products back at the end of the product’s in-use phase for some form of refurbishment and reuse, or recycling as deemed appropriate for the relevant product specific use and purpose.
- b. **Verification of Product Stewardship Program Arrangements** – Applicant is to demonstrate that necessary arrangements are in place to deliver the claims of the product stewardship program in accordance with Part a) requirements above including but not limited to: demonstration that contractual agreements exist between the Applicant and/or supplier, wholesaler or retailer with third party recyclers, transport companies, charities, second-hand retailers and refurbishment companies.
- c. **Design for Disassembly** – Applicant is to demonstrate appropriate design for disassembly strategies that ensure products are designed in a way that enable their easy separation into base constituent materials to improve end of life reuse or recycling (where relevant).
 - o Level A = 90%, Level B= 50%, Level C = not required

PAC Assessment:

Applicants are required to provide following evidence:

- a. **Product Stewardship Program** – A copy of Product Stewardship Policy containing details of Applicant’s commitment to the Products at the end of life for recycling, re-using, or donating as deemed appropriate for the relevant product specific use and purpose. This policy must be publicly available via publications or website pages, etc.
- b. **Verification of Product Stewardship Program Arrangements** – Provide a document or diagram showing the Product Stewardship Program arrangements (after collecting from the customers), copies of contractual agreements with the suppliers, distributors, retailers, third party recyclers, transport companies, charities, second-hand retailers and/or refurbishment companies can be provided as evidence and where possible volumes or quantities of products actually recycled.
- c. **Design for Disassembly** – This criterion is to ensure that Products comprising of a number of components can be separated into recyclable units. A copy of the expansion diagram of Product or disassembly instructions manual to show how Product can be disassembled must be provided. Plastic components must be identified with polymer recycling numbers, where relevant. Where a product can not be disassembled into recyclable units but can be reused or recycled as a whole, it will satisfy this criterion when satisfactory evidence to demonstrate that the Product can be reused or recycled is provided.

Data collection and analysis process in accordance with GreenTag End of Life Assessment -Procedure 4, if required in accordance with performance requirements in Matrix 5 below.

5.1.08. PAC-8 Product Emissions

Low VOC Emissions – requires certified products with interior fitout applications (e.g. furniture, floor coverings) to comply with the Volatile Organic Compound (VOC) emission limit benchmarks stated in the various Green Star™ Technical Manuals (or other country based GBC rating tool requirements, e.g. LEEDv4) and editions in accordance with the Additional Guidance from relevant GBC sections and as shown in Supplementary Category Specific Product Standards as shown in Supplementary Category Standard).

PAC Assessment: Data collection and analysis process in accordance with GreenTag Product Emissions - Procedure 5, if required in accordance with performance requirements in Matrix 5 below.

5.2 Technical Standards relevant to Product Sub-components

This standard allows for the recognition and assessment of sub-component products that relate to the building elements, materials, joinery and furniture assessed.

Subcomponents cannot in themselves be attributed credit points, but they can be attributed a level of compliance that is consistent with a finished element or unit credit point score (this may require qualification to explain any conditions that would be required to be met for the finished element to achieve the credit points).

5.3 GreenRate Technical Standards relevant to Green or Healthy Building Rating Schemes

Products are to demonstrate compliance with the relevant Green Star™ Technical Manuals, USGBC LEED® Reference Guides or other Green or Healthy Building Rating Scheme technical requirements in accordance with the most recent published requirements relating to the relevant issue of the tool relevant to the country or region of certification.

5.4 Determining Level Awards

The GreenRate Level Awards are determined by reference to the Matrix 5 Series of Tables. Products that demonstrate they meet each of the PAC requirements, as represented by the shaded sections of the Matrix under each scheme, are certified to the Level of the scheme. There are three levels of Certification, Level A, Level B and Level C, with each level having multiple schemes available to achieve that level.

GreenTag (the Conformity Assessment Body) will determine which scheme is applicable to the product based on the criteria with which the product complies. Applicants are required to submit evidence towards demonstrating compliance to all applicable criteria. GreenTag will select the scheme that best fits the products compliance to the criteria.

Only the schemes identified in Matrix 5 will be used, and the Applicant may not customise or opt out of complying with any criteria identified in a scheme.

5.5 Summary of Level A Schemes – Matrix 5.1

Products certified under a scheme listed in Matrix 5.1, will be awarded a GreenTag GreenRate Level A rating.

Minimum Requirements for all A level Schemes: All products certified under A level Schemes will have met the following requirements:

- PAC 2: Toxicity
 - Pass ESCAP with no 'Issues of Concern'
 - Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)
- PAC 5: Social and Environmental Requirements
 - Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation
- PAC 6 Durability
 - Comply with all relevant Fitness for Purpose requirements
 - Provide replacement parts for the useful life of the product (where relevant)
- PAC 7 End of Life
 - Demonstrate design for disassembly of 90%
- PAC 8 Product Emissions
 - Comply with VOC emission levels

Level A schemes also assess additional criteria for compliance, and can be categorized as follows:

Original Approval Schemes A1 and A2

Previously identified as Level A and Level B respectively in GreenTag v2.4, these schemes are the original schemes approved by the GBCA. A1 is the most robust scheme and assesses products that demonstrate compliance to all criteria. A2 assesses products that demonstrate compliance to all criteria except Verification of Product Stewardship Program Arrangements, and additional requirements under PAC -5 (Compliant Supply Chain, Public Reporting, or SA8000).

Schemes A3-A17: Greenhouse Gas Emissions Accounting Plus Two PACs

These schemes assess products that comply with the minimum requirements for A level schemes, PAC-1 Greenhouse Gas Accounting and at least two of the following PACs:

- PAC-3 Materials Extraction
 - Data Collection
 - Achieve 50% benchmark under one or more optimization options
- PAC-4 Water
- PAC -5 Social and Environmental Requirements
 - Comply with 2 of the following 4 criteria
 - Compliant Supply Chain
 - Local Procurement
 - Public Reporting
 - Compliant Environmental Claims
 - OR Compliance to SA8000 or ISO 26000
- PAC -7 End of Life
 - Product Stewardship Program.

Scheme A18: Greenhouse Gas Accounting and Verification of Product Stewardship Program

This scheme assesses products that comply with the minimum requirements for Level A schemes, PAC-1 Greenhouse Gas Accounting, and under PAC-7 End of Life, Verification of Product Stewardship Arrangements.

Scheme A19: Verification of Product Stewardship and Materials Extraction

This scheme assesses products that comply with the minimum requirements for Level A schemes, under PAC-7 End of Life, Verification of Product Stewardship Arrangements, and the following:

- PAC-3 Materials Extraction
 - Data Collection
 - Achieve 50% benchmark under one or more optimization options

Scheme A20 Verification of Product Stewardship and Water Usage Accounting

This scheme assesses products that comply with the minimum requirements for Level A schemes, PAC -7 End of Life, Verification of Products Stewardship Arrangements, and PAC -4 Water.

Schemes A21 - A24: Verification of Product Stewardship & Social and Environmental Compliance

These schemes assess products that comply with the minimum requirements for Level A schemes, under PAC-7 End of Life, verification of product stewardship arrangements, and the following:

- PAC -5 Social and Environmental Requirements
 - Comply with 2 of the following 4 criteria:
 - Compliant Supply Chain
 - Local Procurement
 - Public Reporting
 - Compliant Environmental Claims

OR Compliance to SA8000 or ISO 26000

Schemes A25 – A28: Verification of Materials Extraction, Water, CSR and End of Life

These schemes assess products that comply with the minimum requirements for Level A schemes and ALL of the following PACs:

PAC-3 Materials Extraction

Data Collection

Achieve 50% benchmark under one or more optimization options

PAC-4 Water

PAC -5 Social and Environmental Requirements

Comply with 2 of the following 4 criteria

Compliant Supply Chain

Local Procurement

Public Reporting

Compliant Environmental Claims

OR Compliance to SA8000 or ISO 26000

PAC -7 End of Life

Product Stewardship Program

Criteria	SCOPE	GreenTag GreenRate Level A Schemes																												
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	
Sec 5.1.01	PAC - 1 Greenhouse Gas Emissions Greenhouse Gas Accounting																													
Sec 5.1.02	PAC - 2 Toxicity No ES CAP 'Red Light' Comments No ESCAP 'Issue of Concern' Comments																													
Sec 5.1.03	PAC - 3 Materials Extraction Data Collection Optimisation																													
Sec 5.1.04	PAC - 4 Water Water Use Accounting Achieve 50% benchmark under one or more options																													
Sec 5.1.05	PAC - 5 Social and Environmental Requirements Legal Compliance Compliant Supply Chain or Local Procurement Public Reporting Environmental Claims SA 8000 or ISO 26000																													
Sec 5.1.06	PAC - 6 Durability Fitness for Purpose Replacement Parts																													
Sec 5.1.07	PAC - 7 End of Life Product Stewardship Program Verification of Product Stewardship Program Arrangements Design for Disassembly (90% Lvl A, 50% Lvl B)																													
Sec 5.1.08	PAC - 8 Product Emissions VOC Emissions																													

5.6 Summary of Level B Schemes - Matrix 5.2

Products certified under a scheme listed in Matrix 5.2 will be awarded a GreenTag GreenRate Level B rating.

Minimum Requirements for all B level Schemes:

All products certified under B level Schemes will have met the following requirements:

PAC 2: Toxicity

Pass ESCAP with no 'Issues of Concern'

Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)

PAC 5: Social and Environmental Requirements

Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation

PAC 6 Durability

Comply with all relevant Fitness for Purpose requirements

Provide replacement parts for the useful life of the product (where relevant)

PAC 7 End of Life

Demonstrate design for disassembly of 50%

PAC 8 Product Emissions

Comply with VOC emission levels

Level B schemes also assess additional criteria for compliance, and can be categorized as follows:

Original Approved Scheme B1: Verification of Materials Extraction

This scheme originally identified as Level C under GreenTag v2.4 and approved by the GBCA, assesses products that comply with the minimum requirements for Level B schemes and meet the requirements of PAC -3 Materials extraction including data collection and 20% benchmark under at least one optimization option.

Scheme B2: Verification of Greenhouse Gas Accounting

This scheme assesses products that comply with the minimum requirements for Level B schemes and complies with PAC -1 Greenhouse Gas Accounting.

Scheme B3: Verification of Water Use Accounting

This scheme assesses products that comply with the minimum requirements for Level B schemes and complies with PAC - 4 Water.

Scheme B4 – B7: Verification of CSR

These schemes assess products that comply with the minimum requirements for Level B schemes and achieve the following:

PAC -5 Social and Environmental Requirements

Comply with 2 of the following 4 criteria

Compliant Supply Chain

Local Procurement

Public Reporting

Compliant Environmental Claims

OR Comply to SA8000 or ISO 26000

Scheme B8: Verification of End of Life and Product Stewardship

This scheme assesses products that comply with the minimum requirements for Level B schemes and comply with PAC-7 End of Life, demonstrating a Product Stewardship Program.

Matrix 5. Summary of Level B Schemes

Criteria	B Level Schemes							
	B1	B2	B3	B4	B5	B6	B7	B8
PAC - 1 Greenhouse Gas Emissions Greenhouse Gas Accounting								
PAC - 2 Toxicity No ESCAP 'Red Light' Comments								
PAC - 3 Materials Extraction No ESCAP 'Issue of Concern' Comments								
PAC - 4 Water Water Use Accounting								
PAC - 5 Social and Environmental Requirements Legal Compliance								
Compliant Supply Chain or Local Procurement								
Public Reporting								
Environmental Claims								
SA 8000 or ISO 26000								
PAC - 6 Durability Fitness for Purpose								
Replacement Parts								
PAC - 7 End of Life Product Stewardship Program								
Verification of Product Stewardship Program Arrangements								
Design for Disassembly (90% Lvl A, 50% Lvl B)								
PAC - 8 Product Emissions VOC Emissions								

Products certified under a scheme listed in Matrix 5.2 will be awarded a GreenTag GreenRate Level B rating.

5.7 Summary of Level C Schemes – Matrix 5.3

Products certified under a scheme listed in Matrix 5.3 will be awarded a GreenTag GreenRate Level C rating.

Minimum Requirements for all C level Schemes:

All products certified under C level Schemes will have met the following requirements:

PAC 2: Toxicity

Pass ESCAP with no 'Red Light Comments'

Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)

PAC 5: Social and Environmental Requirements

Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation

PAC 6 Durability

Comply with all relevant Fitness for Purpose requirements

Provide replacement parts for the useful life of the product (where relevant)

Level C schemes also assess additional criteria for compliance, and can be categorized as follows:

Scheme C1: Verification of Water Use Accounting

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with PAC – 4 Water.

Schemes C2 – C5: Verification of Social and Environmental Requirements

These schemes assess products that comply with the minimum requirements of Level C schemes and achieve the following:

PAC -5 Social and Environmental Requirements

Comply with 2 of the following 4 criteria

Compliant Supply Chain

Local Procurement

Public Reporting

Compliant Environmental Claims

OR Comply to SA8000 or ISO 26000

Scheme C 6: Verification of Data Collection

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with the data collection requirement under PAC -3 Materials Extraction.

Scheme C7: Verification of Product Stewardship Program

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with the Product Stewardship criteria under PAC-7 End of Life.

Scheme C8: Verification of Product Emissions

This scheme assesses products that comply with the minimum requirements of Level C schemes and comply with VOC emission levels under PAC – 8 Product Emissions.

Criteria	C Level Schemes							
	C1	C2	C3	C4	C5	C6	C7	C8
PAC -1 Greenhouse Gas Emissions Greenhouse Gas Accounting								
PAC - 2 Toxicity No ES CAP 'Red Light' Comments No ESCAP 'Issue of Concern' Comments								
PAC - 3 Materials Extraction Data Collection Optimisation								
Achieve benchmark under one or more options (50% LVI A, 20% LVI B)								
PAC - 4 Water Water Use Accounting								
PAC - 5 Social and Environmental Requirements Legal Compliance Compliant Supply Chain or Local Procurement Public Reporting Environmental Claims SA 8000 or ISO 26000								
PAC - 6 Durability Fitness for Purpose Replacement Parts								
PAC - 7 End of Life Product Stewardship Program Verification of Product Stewardship Program Arrangements Design for Disassembly (90% LVI A, 50% LVI B)								
PAC - 8 Product Emissions VOC Emissions								

Matrix 5.3. Summary of Level C Schemes – Products certified under a scheme listed in Matrix 5.3 will be awarded a GreenTag GreenRate Level C rating.

5.8 Relationship limits between LCARate and GreenRate

- a) A product can be assessed for GreenRate Certification without LCARate Certification.
- b) It is possible to have a product assessed within LCARate alone (without GreenRate) without an LCA analysis as it means the product is scored as '1' in each case where an LCA is required for scoring.
- c) GreenRate Certified Products are automatically *deemed GreenTag Bronze* even if no complying LCA or LCARate assessment is provided or undertaken

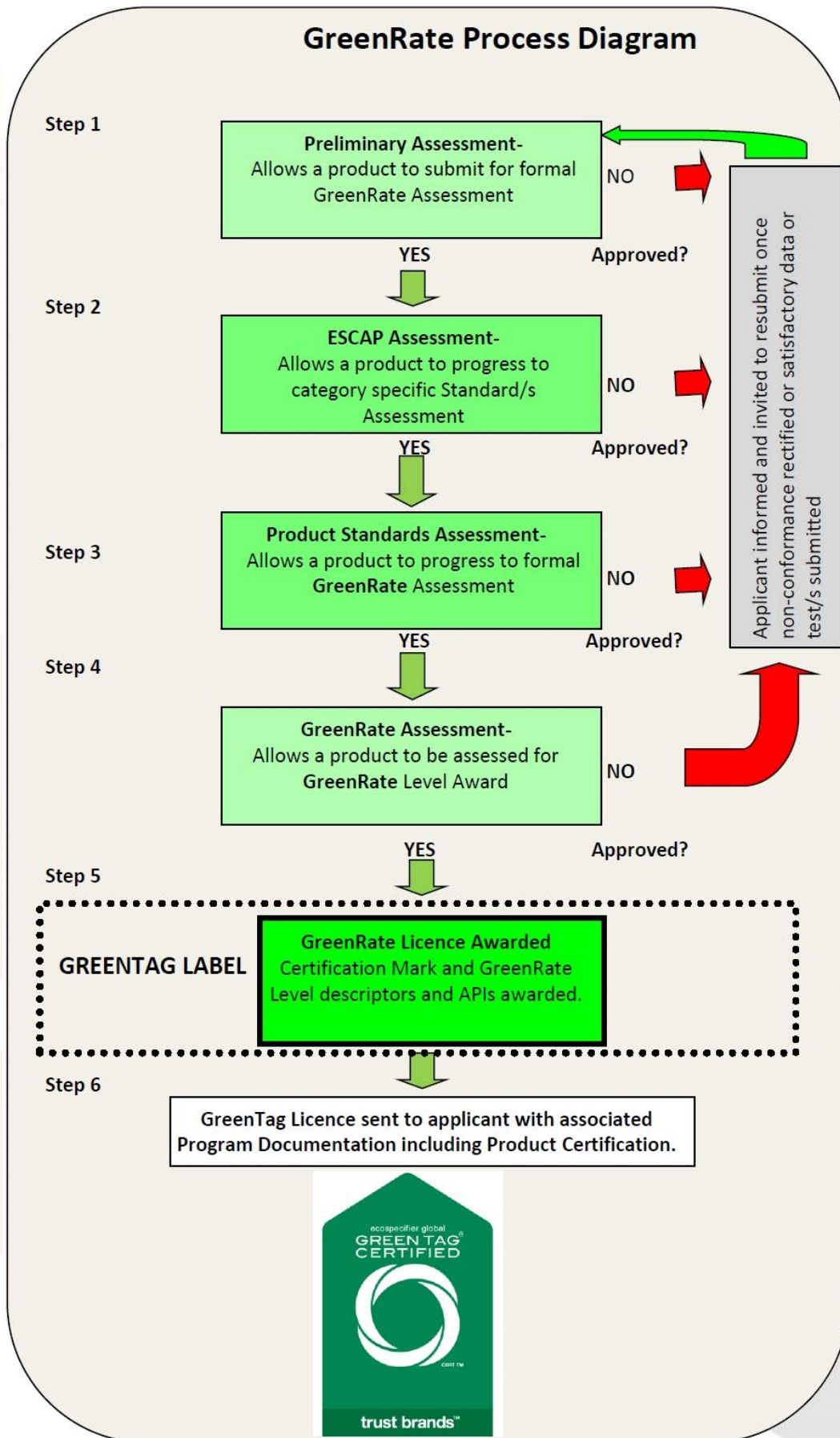


Figure 4: GreenRateCertification Process

6.0 HEALTHRATE, CARBONRATE AND WATERRATE SCHEMES

HealthRate, CarbonRate and WaterRate are separate GreenTag Schemes and Marks derived from assessment processes within this Standard and the subject of internal process documentation and can be conducted concurrently with LCARate and/or GreenRate or independently.

6.01 HealthRate Scheme

HealthRate is a 4 tier (Bronze, Silver, Gold and Platinum) health and ecotoxicity rating system based on the ESCAP methodology with a focus on the healthiness of 'product in use' in accordance with Section 8.0 The Cautionary Assessment Process of this standard. It evaluates the Product's Healthiness in use.

HealthRate results are based on Product Health Declarations (PHDs), which is a transparency tool to communicate and interpret product toxicity data and risk assessment.

6.02 CarbonRate Scheme

CarbonRate is based on LCA methodology and allows to assess the product's impact on climate change compared to a Business As Usual baseline product.

6.03 WaterRate Scheme

WaterRate is based on LCA methodology and allows to assess the product's impact on water resources compared to a Business As Usual baseline product.

7.0 ADDITIONAL PROCESSES & REPORTING

Global Greentag may develop additional processes and transparency reports relating to existing certifications, such as Modern Slavery Declaration, Material Resilience Declaration, Circular Economy Declaration, VOC Rating tools.

All such processes will be documented and available to bona fide stakeholders on request, from the Program Director.

These processes will have defined intention, scope, requirements and compliance assessment and may include additional criteria than included in this standard.

8.0 Appendix 1: The Cautionary Assessment Process – ESCAP v.10

The Red Lights or Issues of Concern policy is based on the Precautionary Principle, hence the issues noted below are not the only basis on which Issues of Concern or Red Light Comments will be issued and worst-case assessments will be used where different information sources are in conflict. They are intended to be 'live' standards that will change as new information becomes available about impacts and levels of impacts of chemicals and processes over time.

All Products will be assessed under ESCAP. GreenTag Products will also be assessed under 9.0 Appendix 2 Supplementary Product Standards.

If a Product contains any of the following impacts, it will, subject to the Risk Analysis process require either an automatic Issue of Concern, a Red Light Comment or, as the strongest course of action, a Red Light Exclusion from being Certified:

- a) Non certified (i.e. FSC, PEFC or other recognized sustainability forestry certification) timber material or its primary derivatives will be subject to risk assessment carried out by Global GreenTag and the outcome may limit the products to a certain level. The timber material or its primary derivatives may pass the ESCAP without any issues or warrant an issue of concern or a Red Light Comment or possibly even a Red Light Exclusion depending on the risk involved. Legally sourced certified timber material or its primary derivatives will also be subject to risk assessment and may trigger a Red Light Comment or Red Light Exclusion when unable to qualify the source of the forest or is determined to be of **high conservation value or remnant native forest**.*
- b) Post Consumer Recycled timber must comply with one of the following:
 - a. Timber is certified by one of the recognized Sustainability forestry certification schemes; OR
 - b. The company's voluntary tracing system ensures that the timber is post-consumer recycled. This verification system must be third party certified as a part of ISO 9001 and/or ISO 14001 or verifiable by Global GreenTag; OR
 - c. A signed declaration from an auditor confirming the percentage of post-consumer recycled content in the final Product. This auditor must be registered by Exemplar Global or other equivalent national or international auditor accreditation system.
- c) If product contains Timber material (or is made from its primary derivatives) from **high conservation value remnant ecosystem**, this warrants a Red Light Exclusion (even if it is 'Legal Source' certified).
- d) Each Substance will be classified in accordance with Clauses 8.0 (f), 8.1 to 8.9 and 8.12 into Levels 0, 1, 2 and 3 based on REACH/GHS classifications and Supplementary Standards.
- e) If the manufacture/use of a product involves significant environmentally damaging processes or emissions or Acute, Chronic, Long term Persistent, Bioaccumulating Toxics (PBT) or Carcinogenic, Mutagenic, Reprotoxic (CMR) or endocrine disrupting impacts, this warrants a Red Light comment or Exclusion (subject to section 8.10 process below).
- f) If a Product contains undefinable materials (UVCBs) where there is no cas number or testing is inadequate or no further information is available or there are research papers indicating potential issues that are not being reflected in GHS yet or other recognized toxicity database, then GreenTag has discretion to identify them as substances with 'Issues of Concern' (Grey Chemicals). The classification will be based on the Best Practice Knowledge, current Scientific research and the Precautionary Principle.

* Plantation Softwood composite materials and its by-products originating from Australia and New Zealand are recognized as timber sourced from legal sources.

8.1 Substances of Very High Concern

Persistent Organic Pollutants (POPs) from the Stockholm Convention:

All of the chemicals listed in the Annex A, B, and C of the Stockholm Convention are **banned** chemicals. If any of the listed chemicals exist in a product, that Product cannot be Certified, i.e. Red Light Exclusion.

Annex III of the Rotterdam Convention

The chemicals listed in Annex III include highly hazardous pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by Parties. There are a total of 40 chemicals listed in Annex III, 29 are pesticides (including 4 severely hazardous pesticide formulations) and 11 industrial chemicals.

All of these chemicals are banned chemicals in relation to the purposes specified in the Rotterdam Convention Prior Informed Consent Decision Guidance Documents (see <http://www.pic.int/home.php?type=t&id=29&sid=30>). If any of the above chemicals exist in a product at any concentration, that product cannot be certified at any level, i.e. Red Light Exclusion. See Table in Appendix 5 for current chemicals.

Ozone Depleting Substances – Substances responsible for ozone depletion

Any chemicals recognized by the Montreal Protocol (Annex A, B, C or E) as ozone-depleting substances are Banned (<http://ozone.unep.org/en/handbook-montreal-protocol-substances-deplete-ozone-layer/44>).

Refrigerants

Any refrigerants with an ODP value higher than 0 or a GWP potential higher than 10 are Banned.

Additional Level 0 Chemicals

Substances of Very High Concern included in Annex XIV of REACH "Authorisation List" and "Candidate List".

Substances included in Annex XVII of REACH "Restriction List" are banned unless they are not captured by the – Conditions of restriction under Annex XVII of REACH defined by the European Chemicals Agency.

APEOs – or *alkylphenol ethoxylates* are surfactants with R51/52/53 attributions that are also Banned due to their high environmental impacts and ready availability of non-toxic alternatives in all applications.

8.2 Ionizing Radiation

Any product containing or responsible for ionizing radiation levels above background or healthy levels according to the calculations excerpted from EC Radiation protection 112 Standard: 'Radiological Protection Principles concerning the Natural Radioactivity of Building Materials' shown in Appendix 2 is a **Level 0** Red Light Exclusion.

8.3 Carcinogens

Substances capable of causing cancer.

Any chemicals classified by IARC: Refer <http://www.iarc.fr/IARCPress/index.php>

Category 1	(Carcinogenic to humans)	Level 1
Category 2A	(Probably carcinogenic to humans)	Level 1
Category 2B	(Possibly carcinogenic to humans)	Level 2
Category 3	(Not classifiable as to its carcinogenicity to humans)	Level 3
Category 4	(Probably not carcinogenic to humans)	Level 3

Where any chemical or agent does not have a CAS number or is noted as 'not classifiable as to its carcinogenicity to humans' refer to clause 'd' in Appendix 6 above..

8.4 Mutagens

Substances capable of impairing or modifying genes.

Any chemicals classified by EU Regulation (EC) No 1272/2008 (CLP Regulation) or subsequent amendments as:

Muta. 1A	(Known to be mutagenic to humans)	Level 1
Muta. 1B	(Should be regarded as if they are mutagenic to humans)	Level 1
Muta. 2	(Suspected to have mutagenic concern for humans)	Level 1

8.5 Reprotoxic substances

Substances toxic to reproduction (developmental toxicity or impairment of fertility).

Any chemicals classified by EU Regulation (EC) No 1272/2008 (CLP Regulation) or subsequent amendments as:

Repr. 1A	(Known to be reprotoxic for humans)	Level 1
Repr. 1B	(Should be regarded as if they are reprotoxic for humans)	Level 1
Repr. 2	(Suspected to be reprotoxic for humans)	Level 1
Lact.	(Evidence of adverse effects in the offspring through breast milk)	Level 1

8.6 Endocrine Disruptors

Substances capable of interfering with the body's endocrine system

Any chemicals classified in the the European Commission Candidate list Annex I

(http://ec.europa.eu/environment/chemicals/endocrine/strategy/substances_en.htm) as:

Category 1	(Evidence of ED activity in at least one species using intact animals)	Level 1
Category 2	(At least some in vitro evidence of biological activity related to ED)	Level 1
Category 3	(No evidence of ED activity or no data available)	Level 3

This list being a priority list for assessment and not a definitive classification based on endocrine disrupting potential, additional research may be conducted for the assessment of chemicals classified under Categeory 1 and 2 of this list.

8.7 RoHS

The following are considered hazardous substances under the European RoHS prohibited substances in electronic goods regulations:

• Lead	Level 1
• Cadmium	Level 1
• Mercury (excepting Lighting)	Level 0
• Hexavalent Chromium	Level 1
• Polybrominated biphenyl (PBB)- OctaPBB and PentaPBB	Level 0
• Polybrominated diphenyl ether (PBDE)- OctaBDE and PentaBDE	Level 0

Electronics and electrical and mechanical parts and lamps are derogated from ESCAP assessment if they are certified RoHS (Directive 2002/95/EC).

8.8 PVC – VCM content

Vinyl Chloride Monomer (VCM) content of the raw PVC resin must also not exceed 1 ppm when delivered to the end processor.

8.9 Low Concentration and Processing Use chemicals where a substance of Very High Concern is used

Low Concentration and Processing use chemicals including hexavalent chromium may be approved where an appropriate Precautionary Assessment process is applied and the context and conditions assessed on-site and approved as safe. This policy must be applied consistently across a range of relevant products and processes and is subject to a full risk analysis and demonstrated mitigation strategies. GreenTag must be satisfied that the ingredient does not appear in the end use product; however, temporary exemptions are extended for this certification period and may be approved for coated steel products.

Blowing agents and isocyanate compounds used for Polyurethane Foam

CFC, HCFC, HFC, methylene chloride and halogenated organic compounds must not be used as blowing agents. Isocyanate compounds must only be used in a closed process with the prescribed protective equipment and in accordance with regulatory requirements.

Hexavalent Chromium

It must be demonstrated by on site risk assessment that Cr(VI) poses no risk such as in the case where the application is fully sealed and/or automated and/or monitored and/or is a low risk compound.

The ESCAP risk assessment will determine:

- likely exposure paths of Cr(VI) in respirable form or dermal absorption pathways;
- if respirable Cr(VI) is emitted or dermal absorption pathways established, determine the likelihood of exposure during the production process,
- the availability and applicability of emissions resulting from the processing of finished products such as welding, cutting, and grinding.
- whether the Cr(VI) compounds will be bound to other materials and thereby the potential bioavailability is reduced

- e. the length of time that is required for any exposed Cr(VI) compounds that are likely to be subject to natural degradation process to the less hazardous Cr(III), and therefore minimising the risk of hazardous exposure and harm;
- f. Coated steel products using Hexavalent Chromium currently will be certified for one period provided that:
 - i. No further re-certification will (subject to a review or current alternatives at that time), be allowed after October 2022*; and
 - ii. Evidence is submitted as to why conversion to an alternative technology is not able to be undertaken prior to this date.

*Review period for this clause is in 2022, in line for GGT standard review in 2022.

8.10 Exceptions to ESCAP Process requirements

6.10.1 LCARate, GreenRate, PHD and HealthRate

Products containing broadscale, endemic, naturally occurring content do not trigger Red Light Comments or Issues of concern. These materials include but are not limited to:

- i. Crystalline Silica;
- ii. Wood and other natural organic fibres;
- iii. Titanium Dioxide
- iv. Carbon Black
- v. Recycled materials that contain chemicals / components may not trigger Red Light Exclusions, Red Light Comments or Issues of Concern, provided these chemicals/components were added in the previous life cycle of the material and have a Low risk according to the risk categorization procedure identified in Step 2 of ESCAP. This applies to post consumer recycled materials only; pre-consumer or post industrial recycled content does not qualify for an exception. Post product testing may be required to show that end products have 'safe' VOC emission levels.

6.10.2 LCARate

Products containing broadscale, endemic, naturally occurring content are excluded from this assessment process. The materials excluded include but are not limited to:

- i. VOCs generated by direct derivatives of naturally occurring plant and animal compounds.

Other materials in this category may be determined by GreenTag Program Director in consultation with NAC and IEP.

6.10.3 Active Ingredients and Fitness for Purpose

Active ingredients providing properties that are necessary to perform the designated function of the product and can not be replaced by other ingredients are to be assessed by ESCAP, with risk analysis to account for safety measures undertaken by the Applicant to minimize risks associated with the final product use.

6.10.4 Alloys

Alloys and their comprising substances as Defined Materials are derogated from ESCAP.

6.10.5 Orthophthalates

Products containing orthophthalates (apart from the ones that are already banned under current standard) currently will be certified for one period provided that:

- i. it is understood that no further re-certification will (subject to a review or current alternatives at that time), be allowed after October 2022*; and
- ii. Evidence is submitted as to why conversion to an alternative plasticiser has not been effected prior to this date.
- iii. A further review of international research and legislation has been undertaken and this provision still deemed appropriate.

Note: any new scientific and regulatory information may be taken into account to review this clause before the sunset date.

8.11 ESCAP Assessment

Applicants must provide a list of their Products and its ingredients, identifying CAS numbers and a list all suppliers. Applicants are required to provide a full declaration of substances down to 0.01% by weight of homogenous materials used in the product (or further such more detailed requirements as may be required by sector specific or Supplementary Standard).

The following is the process for ESCAP assessment:

6.11.1 Classify inputs

A toxicity assessment can only be conducted when a full understanding of product inputs, their function and risks are identified. First step to ESCAP assessment is to classify Product inputs into homogenous materials, substance, intentionally used substance, intended reaction product, impurities, parts, defined materials and undefinable materials.

6.11.2 Determine scope of ESCAP

Product Assessors are required to determine the scope of toxicity assessment in order to clearly communicate the boundaries of where risk was identified and assessed. In general, the risk assessment for the Product is undertaken at substance level; however, when Tier 1 suppliers are handling monomers, catalysts, processing aids, auxiliaries, etc then the risk assessment will be taken further to the Intended Reaction Product and Intentionally Used Substance level.

6.11.3 Identify Cas numbers and their relevant R-phrases or H statements

Determine the Chemical Abstract Service (CAS) number and where relevant names as per The International Union of Pure and Applied Chemistry (IUPAC), then using the chemical databases prescribed by the Standard/s below determine the various H statements or their equivalents in R-phrases attributed to a material.

International: CLP Regulation (EC) 1272/2008 - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures, United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) UN GHS.

Australia: Safe Work Australia's Hazardous Chemical Information System (HCIS).

Using the H statements (or their equivalents in R-phrase), Level 1, 2 and 3 chemical categorisation, a material is classified according to their potentially adverse health and environmental effects.

For 'Undefinable Materials (UVCBs)' see clause 6.0 (f).

6.11.4 Preliminary Assessment

Specific thresholds have been set for each level of chemical, in order to determine what action should be taken with a particular product based on NOAELs and NOAECs from GHS, in Table 1 below and where relevant to a Supplementary Product Category, in Appendix 2.

Example, a product that contains a Level 1 Chemical warrants an Issue of Concern if the chemical is greater than 0.1% of the Products total mass, and warrants Red Light Exclusion if the chemical constitutes greater than 1% of the Products total.

Note see Tables 1-3 below for H statement Actions.

Step 1: Based on the level categorisation of the R-phrase H statement, determine whether the Product is assessed as being excluded, if a Cautionary Comment is to be applied and if so at what level.

Table 1 - Preliminary categorisation of hazardous substances based on H statements

ESCAP category	Hazardous substance H-Statement levels (and proportion in the finished product required to trigger preliminary categorization)				
	Level 0 Very High Risk -Immediate exclusion	Level 1 High risk	Level 2 Medium - Low risk	Level 3 Low to no risk or safety concern	Grey Chemicals (Unknown)
Declaration limit for homogenous materials & components*	≥0.01%	≥0.01%	N/A	N/A	≥0.01%
Issue of Concern	Always	≥0.1% <0.5%	≥1% <5%	No action required.	ALL
Red Light Comment		≥0.5% <1.0%	≥5% <10%		N/A
Red Light Exclusion		≥1.0%	≥10%		N/A

We have adopted GHS Hazard Class cut off as shown in Table 1.1 and have grouped our levels as shown in Table 5.

*As a part of an international ecolabel harmonization process, a lower disclosure threshold of **0.01%** (100 ppm) has been adopted in this version 4 to ensure that banned ingredients and SVHCs are captured at a lower threshold.

The above thresholds are derived from REACH/OSHA (Originally EU Directive 2001/59/EC: Clause 1.7.2.1. Classification of substances containing impurities, additives or individual constituents):

“Where impurities, additives or individual constituents of substances have been identified, they shall be taken into account if their concentration is greater than or equal to the limits specified:

- i. 0.1% for substances classified as very toxic, toxic, carcinogenic (category 1 or 2), mutagenic (category 1 or 2), toxic to reproduction (category 1 or 2), or dangerous for the environment (assigned the symbol .N. for the aquatic environment, dangerous for the ozone layer):
- ii. 1 % for substances classified as harmful, corrosive, irritant sensitising, carcinogenic (category 3), mutagenic (category 3), toxic to reproduction (category 3), or dangerous for the environment (not assigned the symbol .N., i.e. harmful to aquatic organisms, may cause long-term adverse effects), unless lower values have been specified in Annex I.”

Note: Where lower values have been set for chemicals under Annex1, those lower values are to be used to assess the category.

These are further reinforced by the use of similar levels within REACH/OSHA, e.g., the most recent GHS and OSHA compliant European community standards shown below is an extract from Annex 1 Table 1.1 of that document.

Table 1.1
Generic cut-off values

Hazard class	Generic cut-off values to be taken into account
Acute Toxicity:	
— Category 1-3	0,1 %
— Category 4	1 %
Skin corrosion/Irritation	1 % ⁽¹⁾
Serious damage to eyes/eye irritation	1 % ⁽²⁾
Hazardous to Aquatic Environment	
— Acute Category 1	0,1 % ⁽³⁾
— Chronic Category 1	0,1 % ⁽³⁾
— Chronic Category 2-4	1 %

⁽¹⁾ Or < 1 % where relevant, see 3.2.3.3.1.
⁽²⁾ Or < 1 % where relevant, see 3.3.3.3.1.
⁽³⁾ Or < 0,1 % where relevant, see 4.1.3.1.

6.11.5 Identify life cycle stage where risk occurs

Step 2: Determine the Hazardous substance risk categorisation, based on potential volume/s/extent of severity/size of the risk and likelihood. The data used to assess this matrix need not be fully quantified or quantifiable and may contain a mixture of quantitative and qualitative assessments.

Determine the Life Cycle Stage in Table 2.1 where the risk is most likely to occur, based on the route of exposure, emission and audit/test reports. Where the risk is related to the Product Stage and is covered under specific occupational health and safety requirements, quantitative data must be provided by the Applicant to establish the risk categorization level.

Table 2.1 – Life Cycle Stages where risk is most likely to occur

Manufacturing Stage	Use Stage	End of Life Stage
Raw Material Supply	Transport to User	Demolition/Removal
Transport to Plant	Installation	Transport
Manufacturing	Use	Disposal/Recycling/Reuse
	Maintenance & Repair	

6.11.6 Determine probability and severity of risk

Determine the probability and severity of risk using table 2.2

Table 2.2 – Hazardous substance risk categorisation review and action required.

		Probability					Highly unlikely or Not Applicable
		Frequent	Likely	Occasional	Seldom	Unlikely	
Severity	Catastrophe	Extremely High		High		Medium	Very low or No Action Required
	Critical	High		Medium	Low		
	Moderate	High	Medium		Low		
	Negligible	Medium	Low				

6.11.7 Final Assessment

Step 3: Determine if a Cautionary comment is required and if so at what level.

The tables below determine the appropriate level of comment regarding hazardous substances. Table 3.1 is to be used for all substances triggering a risk that is applicable to the Building Stage and End of Life Stages of the products' life cycle. Table 3.2 is to be used for all substances triggering a risk that is applicable to the Product Stage of the products' life cycle, where risks are controlled through regulations and occupational health and safety measures.

The worst case Cautionary Comment applicable to the substance from both Table 3.1 and 3.2 is to be used.

Table 3.1 – Cautionary Comment Application Determination – Building Stage and End of Life Stages

ESCAP Level as per Step 2	ACTION TO BE TAKEN				
	Risk categorisation				
	Extremely High	High	Medium	Low	Very Low or Not Applicable
Issue of Concern	Full 'Red Light Comment' required.	Full 'Issue of Concern' required.	State 'Issue of Concern' and include details of how concern can be minimised	Note Human Health Comment and give substantive reasons on the unlikelihood of risk.	No comment or Action required.
Red Light Comment	'Red Light Exclusion' required.	Full 'Red Light Comment' required.	State 'Red Light Comment' and include details of how concern can be minimised.	Note 'Issue of Concern' Comment' and state unlikelihood of concern occurring giving substantive reasons.	No comment or Action required.
Red Light Exclusion	'Red Light Exclusion' required.	'Red Light Exclusion' required.	'Red Light Exclusion' required.	State 'Red Light Comment' and include unlikelihood of concern occurring giving substantive reasons.	No comment or Action required.

Table 3.2 - Cautionary Comment Application Determination – Product Stage

ESCAP Level as per Step 2	ACTION TO BE TAKEN				
	Risk categorisation				
	Extremely High	High	Medium	Low	Very Low or Not Applicable
Issue of Concern	Full 'Issue of Concern' required.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.	No comment required.	No comment or Action required.
Red Light Comment	Full 'Red Light Comment' required.	State 'Red Light Comment' and include details of how concern can be minimised.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.	No comment or Action required.
Red Light Exclusion	'Red Light Exclusion' required.	Full 'Red Light Comment' required.	Full 'Issue of Concern' required.	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.	No comment or Action required.

6.11.8 Applicant to be notified

Once the ESCAP process has been completed, any adverse assessments will be notified to the Applicant with full explanation and opportunity given for submission/s by the Applicant as to why the assessment should be amended. Due consideration will be given to the Applicant submission before the assessment is finalised.

6.11.9 Risk Assessment

ESCAP assumes an Occupational Health & Safety process is in place and personal protective equipment in use. If not, risk will be upgraded appropriate to the extent of the increased hazard. Where a finished product contains Level 1 ingredients, it must be risk assessed and deemed 'safe for use' before certification. Risk assessment of ingredients can also be upgraded due to product use, processing or context. Risk may also be downgraded through thorough assessment of: product use, processing or context, measures put in place by manufacturers, or evaluation of product design that successfully mitigate identified risks.

8.12 Chemical Hazard Categorisation

6.12.1 LEVEL 0 – Banned or Excluded

Intent: Products that contain chemicals/components that are, or probably are, SVHCs, listed in annex A, B and C of the Stockholm Convention, are Ozone Depleting Substances, listed in Annex III Of the Rotterdam Convention, high level endocrine disruptors, restricted substances under annex XVII of REACH or contain high radiation levels.

6.12.2 LEVEL 1 - Very Toxic or Acute

Intent: Products that contain chemicals/components those are, or probably are, highly toxic, create acute reactions or have long term, accumulative, intergenerational or irreversible effects.

6.12.3 LEVEL 2- Harmful or Toxic

Intent: Products that contain chemicals/components that have may have or possibly have mild to moderate toxicity, health or other effects such as long term chronic reactions.

6.12.4 LEVEL 3- Not Harmful or Toxic within Green Building Context.

Intent: No harmful or toxic risk phrases applied for normal use after H statement assessment has been undertaken.

NOTE 1: This does not apply to products where statements like 'insufficient data' or similar, form the basis of the H statement R-phrases assessment.

Where 'insufficient data' or similar, form the basis of the H statement, GreenTag may use other sources of information to determine the Category and may publish a specific 'Issue of Concern' (see Grey Chemicals definition).

NOTE 2: for the GreenTag R-phrases/ H statement Translator Guide, see Appendix 6.

8.13 H statement Chemical Categorisation in accordance with the UN Globally Harmonised System of Classification and Labelling of Chemicals:**6.13.1 Substances with the following H statement attributions are GreenTag Level 1:**

- Highly toxic, create acute reactions or have long term, accumulative, intergenerational or irreversible effects as per 6.9.1;
- GHS Category 1 and 2 from Table 5.
- Mutagenic substances with Classification in Categories 1,2 or 3.
- Reproduction Toxicity Effect Categories, 1, 2 or 3-Developmental Toxicity
- Except Substances of Very High Concern included in Annex XIV of REACH ("Authorisation List") and ("Candidate List"), and substances conditionally restricted under Annex XVII of REACH ("Restriction List") that are nominated as Level 0.

6.13.2 Substances with the following H statement attributions are GreenTag Level 2:

- have mild to moderate toxicity, health or other effects such as long term chronic reactions as per 6.11.2;
- GHS Category 3 and 4 from Table 5.
- Unless the H statement toxicity concentrations of substances have been modified by EU Regulation (EC) No 1272/2008 (CLP regulation) or subsequent updates, Reproduction Toxicity Effect Category 3-Impaired Fertility

6.13.3 Substances with the following H statement attributions are GreenTag Level 3:

- No harmful or toxic risk phrases applied for normal use as per 6.11.3;
- GHS Category 5 from Table 5.

Table 5:

Exposure route	Category 1	Category 2	Category 3	Category 4	Category 5
Oral (mg/kg bodyweight) <i>see: Note (a)</i>	5	50	300	2000	5000 <i>See detailed criteria in Note (f)</i>
Dermal (mg/kg bodyweight) <i>see: Note (a)</i>	50	200	1000	2000	
Gases (ppmV) <i>see: Note (a) Note (b)</i>	100	500	2500	20000	
Vapours (mg/l) <i>see: Note (a) Note (b) Note (c) Note (d)</i>	0.5	2.0	10	20	
Dusts and Mists (mg/l) <i>see: Note (a) Note (b) Note (e)</i>	0.05	0.5	1.0	5	

Note: Gases concentration are expressed in parts per million per volume (ppmV).

Acute toxicity hazard and acute toxicity estimate (ATE) Values defining the respective categories

Note (f) Summary: Category 5 chemicals are relatively low acute toxicity hazard risk- there are expected to have oral or dermal LD50 in the 2000-5000mg/kg bodyweight and equivalent dose for inhalation.

Source: UN Globally Harmonised System of Classification and Labelling of Chemicals

http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html

9.0 Appendix 2: Supplementary Product Category Specific Standards

GreenTag has previously determined Product Category Specific Performance Standards for the following categories of products. Any person wishing to obtain these standards should contact GreenTag via its published contact details:

- Water and Energy Consumption Appliance and Equipment Standards
- Windows and Glazed Doors
- Skylights
- Window Films

9.1 Required PLUS Rating level of Assessments

The following materials or product sectors will require PLUS level detailed LCA assessment in all instances for LCARate assessments:

- Polyvinyl chloride flooring, internal and external wall cladding and other plasticized PVC and UPVC products containing more than 5% PVC;

The following materials or product sectors will also generally require PLUS level detailed LCA assessment for LCARate assessments:

- Paints
- Fabrics and textiles

It is at the Program Director's discretion as to when or if a product or material or supply chain requires auditing or PLUS level assessment.

9.2 Recognised Standards:

Certification under the following recognised schemes will be acknowledged as applicable to the relevant sections of assessment under this standard and evidence of compliance with required outcomes of nominated product testing Standards called up by these schemes:

- US Carpet and Rug Institute's GreenLabel Plus
- GreenGuard
- Australian Certified Organic (ACO),
- National Association for Sustainable Agriculture Australia (NASAA)
- Certified Organic and
- Demeter Certified Organic
- Fair Trade
- FSC
- PEFC
- RSPO
- GEN Ecolabels

Others recognised subsequent to the publication of this version of the standard will be recognised on the GreenTag website.

9.3 Future Standards Development:

In assessing any future product specific standards the following process will be followed:

- A review of existing international ecolabelling and other standards, and
- A review of available LCI data
- A clear definition of the scope of the proposed standard, defining the function purpose of the products under consideration;
- A clear definition of the threshold standards that make the category ecologically or health preferred.

A literature review of the impacts on the environment from this product group will also be undertaken. Scientific research using internationally recognised methods will be given due consideration, preferably studies undertaken in compliance with the ISO 14040 series, in a qualified and representative manner. There is no requirement to undertake new research but rather to gather suitable material that is available.

9.4 Formaldehyde Content Supplementary Standard

Scope

This standard is applicable to formaldehyde-containing engineered wood products (eg. composite wood and Agri-fibre products) for use in interior fitout applications, such as interior panelling or furniture components.

This applies to both LCARate and GreenRate certification.

These formaldehyde emission limit requirements are in accordance with the latest requirement of the Green Building Council of Australia (or country-relevant green or healthy building rating tools, e.g. LEEDv4), as updated from time to time.

Definitions

For purpose of this standard, the following definitions apply.

Engineered wood products include:

- **Particleboard** – a panel composed of wood in the form of discrete particles (as distinguished from fibres, flakes or strands) that are pressed together with resin
- **Plywood** – a panel product consisting of layers of wood veneers in combination with a platform, pressed together with resin
- **Medium Density Fibreboard (MDF)** – a panel composed of wood made by dry forming and pressing of a resonated fibre mat
- **Laminated Veneer Lumber (LVL)** – an assembly of veneers laminated with adhesive, in which the grain direction of the outer veneers and most other veneers is in the longitudinal direction
- **High-Pressure Laminate (HPL)** – sheet(s) consisting of layers of fibrous sheet material, such as kraft paper, and impregnated with thermosetting resins, bonded together by means of heat and pressure
- **Compact Laminate** – a thick HPL and decorative overlaid wood panels
- **Oriented Strand Boards (OSB)** – A panel comprised of wood flakes pressed together with resin.

Exclusions and Notes

This standard does not apply to natural wood veneers.

The following applications of engineered wood are excluded from assessment and do not require documentation:

- Formwork;
- Internal car park applications;

Where only part of the product is composed of an engineered wood product, the limits apply only to that portion of the product, not the entire item.

For a timber product that is determined to contain phenol-based binders (e.g. constructed veneers), further testing results may be requested.

9.4.1 Engineered wood products

Engineered wood products shall demonstrate a level equivalent to or below E1 limit values provided in Table 9.4.1 as per the specified test protocol or equivalent testing methods, or have product-specific evidence that it contains no formaldehyde.

9.4.2 Veneer and plywood

Green Star Requirements:

Veneer and plywood must conform to the relevant formaldehyde testing procedure or equivalent testing methods and demonstrate a level equivalent to or below E1 limit values provided in Table 7.4.1.

Table 9.4.1: Formaldehyde emission limit values for engineered wood products

Test Protocol	Emission limit/Unit of measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11 :2005 method 10 for Plywood	≤1 mg/L
AS/NZS 1859.1 :2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1 mg/L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1 mg/L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) – LVL	≤1 mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1 mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1 mg/L
JIS A 1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m ² hr*
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m ² hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m ² hr (at 3 days)
ASTM D6007	≤0.12 mg/m ³ **
ASTM E 1333	≤0.12 mg/m ³ ***
EN 717-1 (a Iso known as DIN EN 717-1)	≤0.12 mg/m ³
EN 717-2 (a Iso known as DIN EN 717-2)	≤3.5 mg/m ² hr

*mg/m²hr may also be represented as mg/m²/hr

**The test report must confirm that the conditions of Table 3 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.

***The final results must be presented in EN 717-1 equivalent (as presented in the table), using the correlation ratio of 0.98.

LEED Requirements:

The composite wood product category includes all particleboard, medium density fiberboard, hardwood veneer plywood, and structural composite wood not included in the flooring, ceiling, wall panels, or furniture material categories.

For Formaldehyde emissions evaluation, Product meets one of the following:

- 1) EPA TSCA Title VI or California Air Resources Board (CARB) ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins **or**
- 2) EPA TSCA Title VI or CARB ATCM formaldehyde requirements for no added formaldehyde resins (NAF).
- 3) Tested per EN 717-1:2014 for formaldehyde emissions and complies with emissions class E1. Structural composite wood product made with moisture resistant adhesives meeting ASTM 2559, no surface treatments with added urea-formaldehyde resins or coatings, and certified according to one of the following industry standards:

- a) Plywood: compliant in accordance with Voluntary Product Standard - Structural Plywood (PS 1-09), Voluntary Product Standard – Performance Standard for Wood-Based Structural-Use Panels (PS 2-10), or one of the standards considered by CARB to be equivalent to PS 1 or PS 2: (AS/NZS 2269, EN 636 3S (including CE label), Canadian Standards Association CSA O121 for Douglas fir plywood, CSA O151 for Canadian softwood plywood, for CSA O153 Poplar plywood, or CSAO325 for Construction sheathing)
- b) Oriented strand board: specified with the Exposure 1 or Exterior bond classification in accordance with Voluntary Product Standard – Performance Standard for Wood-Based Structural-Use Panels (PS 2-10)
- c) Structural composite lumber: compliant in accordance with Standard Specification for Evaluation of Structural Composite Lumber Products (ASTM D 5456-13)
- d) Glued laminated timber: compliant in accordance with Structural Glued Laminated Timber (ANSI A190.1-2012)
- e) I-joists compliant in accordance with Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists (ASTM D 5055-13)
- f) Cross-laminated timber: compliant in accordance with Standard for Performance-Rated Cross-Laminated Timber (PRG 320-15)
- g) Finger-jointed lumber labeled “Heat Resistant Adhesive (HRA)” in accordance with the American Softwood Lumber Standard (DOC PS-20 2015)

9.4.3 Platinum or Gold LCARate Certification

Products assessed for Platinum or Gold LCARate Certification containing composite wood components shall comply with SuperE0 (or E00) and E0 limits respectively, where product is available in the market with that rating. Where SuperE0 is not available in any specific category E0 is acceptable.

9.4.4 Material Qualities

ESCAP:

In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

9.5 Textiles, Fibres, Skins and Leather Supplementary Standard

Scope

This standard applies to textile clothing and accessories in woven, non-woven or knitted form; interior textiles; fibres, yarn, fabric including durable non-woven fabric intended for use in textile clothing, accessories or interior textiles;; hide and leathers; Textiles and leather used for upholstery, curtains, blinds, screens and acoustic panels; fibres in related products like upholstery filling and mattresses, mattress pads and protectors and general textiles such as geotextiles, etc. Testing under internationally recognized standards is able to be recognized if test reports under local standards are not available (except where specific standards are required by local law).

Definitions

For purpose of this standard, the following definitions apply:

Textile Fibres: natural fibres, synthetic fibres and man-made cellulose fibres

Natural Fibres: cotton and other natural cellulosic seed fibres, flax and other bast fibres, wool and other keratin fibres

Synthetic Fibres: acrylic, elastane, polyamide, polyester and polypropylene

Man-made cellulose fibres: lyocell, modal, acetate, cupro, triacetate and viscose

Skins and leathers: includes skins and leathers from e.g. cattle, sheep, goats or pigs. Any animal skin that is subject to any conservation covenant, regulation or law in any jurisdiction is excluded from the scope of this standard.

9.5.1 Fitness for Purpose

i. Australian Standards:

Products for Certification shall comply with one or more of the relevant Australian Standards including:

- a) AS/NZ 2001 Textile Testing Series
- b) AS 2663.1-1997/Amdt 1-1999 Textiles-Woven and knitted fabrics for window furnishings - Uncoated fabrics
- c) AS 2663.2-1999 Textiles - Fabrics for window furnishings - Coated curtain fabrics
- d) AS 2663.3-1999 Textiles - Fabrics for window furnishings - Vertical and holland blinds
- e) AS 2687-1997 Textiles - Upholstery fabrics for domestic and commercial use (excluding face-coated fabrics)
- f) AS 3567-1988 Textiles - Cloth, duck - Cotton and polyester/cotton
- g) Commercial Textile Association of Australia (CTA)
- h) Association for Contract Textiles,
- i) AFRDI Standard 146 – Leather Descriptions

OR

ii. Internationally Recognized Standards:

Internationally recognized standards if no relevant Australian Standard exists

OR

iii. Country specific standards

Product shall meet or exceed internationally accepted standard/s relevant to any market/s the product is to be exported to

OR

iv. Market Acceptance:

The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function including those shown in section v) and vi) below and meet the Life cycle related requirements;

v. Insect Resistance:

Wool or wool blend fabrics shall comply with Woolmark Company Specifications relevant to the country of use (4 in Australia, 5 in New Zealand) or Wools of NZ rating 3, unless demonstrated unnecessary.

vi. GreenTag fitness for purpose requirements:

The following are minimum fitness for purpose standards for fabrics:

Dimension Changes During Washing and Drying Criteria:

Information on dimensional changes (%) shall be stated on the care label and on the packaging and/or other product information if the dimensional changes after washing and drying exceed the specifications set in the following table:

Textile products or type of material	Dimensional changes during washing and drying
Washable and removable woven upholstery <ul style="list-style-type: none"> - Curtains and furniture fabrics - Mattress ticking 	+/- 2% +/- 3%
Other woven fabrics: <ul style="list-style-type: none"> - Cotton and cotton mix - Wool mix - Synthetic fibres 	+/- 3% +/- 2% +/- 2%
Bathroom linen, including terry toweling and fine r fabrics	+/- 8%
Non woven fabrics: <ul style="list-style-type: none"> - Mattress ticking - Other fabrics 	+/- 5% +/- 6%
Knitted fabrics	+/- 4%
Chunky knit	+/- 6%
Interlock	+/- 5%

This criterion does not apply to:

- fibres or yarn,
- Products clearly labelled 'dry clean only' or equivalent,
- furniture fabrics that are not removable and washable.

Compliance shall be demonstrated as follows:

- For domestic washing ISO 6330 in combination with EN ISO 5077 modified as follows: 3 washes at temperatures as indicated on the product, with tumble drying after each washing cycle unless other drying procedures are indicated on the product, at temperatures as marked on the product.
- For commercial washing, ISO 15797 in combination with EN ISO 5077 modified as follows: minimum temperature of 75°C or as indicated in the standard for the fibre and bleaching combination. Drying shall be as indicated on the product label.
- Alternatively for washable and removable mattress ticking, ISO 6330 in combination with EN 25077 modified as follows: test conditions shall be washing 3A (60°C) and drying C (flat drying) unless stated otherwise on the product label.

Colour Fastness to Washing:

The colour fastness to washing shall be at least level 3 to 4 for colour change and at least level 3 to 4 for staining. This does not apply to products clearly labelled 'dry clean only' or equivalent (in so far as it is normal practice for such products to carry such label), white products or products that are neither dyed nor printed, or to non-washable furniture fabrics. Conformance shall be demonstrated using ISO 105 C06 or AATCC 61 test method.

Colour Fastness to Perspiration:

The colour fastness to perspiration (acid and alkaline) shall be at least level 3 to 4 (colour change and staining). A level of 3 is nevertheless allowed when fabrics are both dark coloured (standard depth > 1/1) and made of regenerated wool or more than 20% silk.

This criterion does not apply to white products or products that are neither dyed nor printed, to furniture fabrics, curtains or similar textiles intended for interior decoration. Conformance shall be demonstrated using ISO 105 E04, AATCC 15 or other recognized test method.

Colour Fastness to Wet Rubbing:

The colour fastness to wet rubbing shall be at least level 2 to 3. A level of 2 is nevertheless allowed for indigo dyed denim.

This does not apply to white products or products that are neither dyed nor printed.

Conformance shall be demonstrated using ISO 105 X12, AATCC 8 or other recognised test method.

Colour Fastness to Dry Rubbing:

The colour fastness to dry rubbing shall be at least level 4. A level of 3-4 is nevertheless allowed for indigo dyed denim.

This criterion does not apply to white products or products that are neither dyed nor printed, or to curtains or similar textiles intended for interior decoration.

Conformance shall be demonstrated using ISO 105 X12, AATCC 8 or other recognised test method.

Colour Fastness to Light:

For fabrics intended for furniture, curtains or drapes, the colour fastness to light shall be at least level 5. For all other products the colour fastness to light shall be at least level 4.

A level of 4 is nevertheless allowed when fabrics intended for furniture, curtains or drapes are both light coloured (standard depth < 1/12) and made of more than 20% wool or other keratin fibres, or more than 20% silk, or more than 20% linen or other bast fibres.

Conformance shall be demonstrated using ISO 105 B02, AATCC 16.1 or 3, or AATCC 16E or other recognised test method. If AATCC method is used, a minimum of 40 hours.

This requirement does not apply to mattress ticking or mattress protection.

9.5.2 Life Cycle Issues

The criteria in this section apply, where appropriate, to all stages of production of the product, including the production of the fibres. It is nevertheless accepted that recycled fibres may contain some of the dyes or other substances excluded by these criteria, but only if they were applied in the previous life-cycle of the fibres.

Situation may exist where supply chain is so obscure that the following information may not be sourced. While every attempt is made to achieve this information, it may not be possible. Hence in the situation where information is not available, the product will trigger an 'issue of concern' and will be limited to Level C. In case of LCARate, the products will not be able to achieve PLUS level and will limit to Streamlined certification.

i. Emissions to Air: manufacturing

Compliance with the requirements in this section shall be demonstrated by providing appropriate documentation including monitoring data and/or test reports along with relevant calculations. Applicants may use AS2986.2-2003/ISO 16200-2:2000 test method.

Acrylic:

The emissions to air of acrylonitrile (during polymerisation and up to the solution ready for spinning), expressed as an annual average, shall be less than 1 g/kg of fibre produced.

Elastane:

The workplace emissions to air of the following substances during polymerization and spinning shall not exceed the following indicative occupational exposure limit values (IOELV) 8-hour time-weighted average:

- (i) diphenylmethane-4,4'-diisocyanate (CAS number 101-68-8) 0,005 ppm
- (ii) toluene-2,4-diisocyanate (CAS number 584-84-9) 0,005 ppm
- (iii) N,N-dimethylacetamide (CAS number 127-19-5) 10,0 ppm

Viscose:

The sulphur content of the emissions of sulphur compounds to air from the processing during fibre production, expressed as an annual average, shall not exceed 30 g/kg staple fibre produced, 40 g/kg filament fibre produced for batch washing processing and 170 g/kg filament fibre produced for integrated washing processing

Polyamide:

Polyamide products shall comply with one of the following requirements:

- The emissions to air of N₂O during monomer production expressed as an annual average, shall not exceed 9g /kg of coprolactam (for nylon 6) or adipic acid (for nylon 6,6).
- Fibres shall be manufactured using at least 20% post consumer or pre-consumer recycled nylon.

Polyester:

Polyester products shall comply with one of the following requirements:

- The emissions of VOCs during polymerisation and fibre production of polyester, measured at the process steps where they occur, including fugitive emissions as well, expressed as an annual average, shall not exceed 1.2 g/kg of polyester chips and 10.3 g/kg for filament fibre.
- Staple fibres shall contain a minimum 50% recycled content and filament 20% of recycled content.

Polyurethane:

Polyurethane Coatings, laminates and membranes:

The workplace emissions to air of the following substances during polymerization and spinning shall not exceed the following indicative occupational exposure limit values (IOELV) 8-hour time-weighted average:

- (i) diphenylmethane-4, 4'-diisocyanate (CAS number 101-68-8) 0.005 ppm
- (ii) toluene-2,4-diisocyanate (CAS number 584-84-9) 0.005 ppm
- (iii) N,N-dimethylacetamide (CAS number 127-19-5) 10.0 ppm

ii. Emissions to Air: indoor air quality

Interior Textiles & Upholstery

VOC Emissions acceptable for the following purposes shall be limited to the relevant levels shown below:

- a) Drapery, acoustic panels, wall and general interior textiles < 0.5 mg/m²/hr
- b) Upholstery < 0.25 mg/m²/hr

Testing shall be in accordance with ASTM D5116-10 or latest version, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products.

OR

Be compliant with UL GreenGuard Standard for Building Materials, Furniture, and Furnishings certified.

OR

Be compliant with Eurofins Indoor Air Comfort

Semi- Volatile organic compounds:

To achieve WELL v2 Feature X10 Part 2 credit recognition, "wall coverings, window blinds and shades, shower curtains, furniture textiles and upholstery products shall contain total phthalates at less than 100ppm or the extent allowable by local code".

Mattresses and Bedding textiles

The VOC emission of the mattress textiles shall not exceed half the emissions values in the test chamber by analogy with either:

- a) the AgBB "Health risk assessment process for emissions of volatile organic compounds (VOC) from building products" in its latest version.

OR

- b) Be compliant with UL GREENGUARD GOLD Standard for Building Materials, Furniture, and Furnishings.

OR

- c) Be compliant with Eurofins Indoor Air Comfort emissions limits.

http://www.greenguard.org/en/technicalCenter/tech_standards.aspx#2

iii. Emissions to Water

Wastewater discharges from wet-processing:

- (a) Waste water from wet-processing sites (except greasy wool scouring sites and skins and leathers tanneries and treatment sites) shall, when discharged after treatment (whether on-site or off-site), have a COD content of less than 20 g/kg of textile processed expressed as an annual average. This requirement shall apply to weaving, dyeing, printing and finishing processes used to manufacture the product(s). The requirement shall be measured downstream of on-site wastewater treatment plant and/or off-site wastewater treatment plant receiving wastewater from these processing sites. The Applicant shall provide detailed documentation and test reports, using ISO 6060 or equivalent, showing compliance with this criterion, together with a declaration of compliance.
- (b) If the effluent is treated on site and discharged directly to waters, it shall also have a pH between 6 and 9 (unless the pH of the receiving water is outside this range) and a temperature of less than 40 °C (unless the temperature of the receiving water is above this value).

Wastewater discharges from wool scouring:

Wool shall be sourced only from wool scourers which comply with the following requirements:

- a) Wool scouring operations shall minimise COD in effluents by maximising dirt removal and grease recovery.
- b) Effluents shall be treated (onsite or offsite) and final discharge to the environment shall not exceed 25g COD/kg of greasy wool for coarse wool and 45g COD/kg greasy wool for fine wool.

The wool scouring plant shall describe, in detail, their treatment of the scouring effluent and continuously monitor the COD-levels and provide relevant data and test reports related to this criterion, using ISO 6060 or equivalent. The above clauses are not applicable if the wool scourers operate closed loop water systems, where no waste water discharge to the environment occurs.

Insect Treatment of Yarn or Fabric:

If permethrin or bifenthrin insect resist agents are used, the levels of these agents in total factory effluent shall not exceed:

Permethrin 9.5g/tonne of treated wool
Bifenthrin 0.1g/tonne of treated wool

This requirement applies to scouring and dye house factories. Compliance with this criterion shall be demonstrated by a declaration of conformance signed by a senior officer from the factory where insect resist treatment is applied and be supported by appropriate test reports and calculations.

Flax and other bast fibres (including hemp, jute, and ramie):

Flax and other bast fibres shall not be obtained by water retting, unless the waste water from the water retting is treated so as to reduce the COD or TOC by at least 75 % for hemp fibres and by at least 95 % for flax and the other bast fibres. The Applicant shall provide detailed documentation and test reports, using ISO 6060 (COD) or equivalent, showing compliance with this criterion, together with a declaration of compliance.

Skins and Leather:

- a) Wastewater from leather tanneries released after processing must not contain more than 1 mg/l of chromium (III) according to tests showing compliance with ISO 9174 or EN 1233 or EN ISO 11885 for chromium or equivalent test method.

- b) COD content of Wastewater released by the tannery after treatment (onsite or offsite) should comply with local regulations.

Metal complex dyes:

If metal complex dyes based on copper, chromium or nickel are used: emissions to water after treatment (fibre, yarn or fabric) shall not exceed: Cu 75 mg/kg; Cr 50 mg/kg; Ni 75 mg/kg based on test reports using the following test methods: ISO 8288 for Cu, Ni; EN 1233 for Cr. or a Declaration of Non-use.

iv. Resource Management

Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat):

Water consumption: The total water use measured at the water intake shall not exceed 20KL/tonne of greasy wool scoured. Measurement of water use shall be continuous.

Energy Consumption: The total useful energy use shall not exceed 10 GJ/tonne of greasy wool scoured.

Flax and other bast fibres (including hemp, jute, and ramie):

Fibres shall be retted under ambient conditions and without thermal energy inputs.

Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate)

Raw materials derived from primary derivatives of wood shall comply with the requirements set in the Appendix 1: ESCAP for wood for products assessed under GreenRate or SAC-5 for 'Timber Based Products' in LCARate. Raw materials derived from secondary derivatives of wood are exempted from this clause.

9.5.3 Fibre and Material Qualities

- a) Fibres for which no fibre-specific criteria are set may be used, with the exception of mineral fibres, glass fibres, metal fibres, carbon fibres and other inorganic fibres.
- b) Fibres that contribute less than 5% of the total weight of the product are excluded from fibre qualities assessment except where fabric is likely to come in contact with skin (e.g. chair upholstery).
- c) At least 85% by weight of all fibres in the product must be either in compliance with the corresponding fibre-specific criteria, if any, or of recycled origin. Recycled content is defined as fibres originating from post industrial waste (including polymer and fibre production waste, cuttings from textile and clothing manufacturers) and post-consumer waste (textile and all kind of fibre and textile products, as well as non-textile waste including PET drinking bottles and fishing nets)
- d) Compliance with these criteria can be demonstrated with a valid current recognised ecolabel certificate.

Residual Chemicals:

i. Natural Cellulosic Seed Fibres (including cotton and kapok):

Fibres must not contain more than 0.5 ppm (sensitivity of the test method permitting) in total of the following substances:

Aldrin, captafol, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, hexachlorocyclohexane (total isomers), 2, 4, 5-T, chlordime-form, chlorobenzilate, dinoseb and its salts, monocrotophos, pentachlorophenol, toxaphene, methamidophos, methylparathion, parathion, phosphamidon.

Australian Certified Organic (ACO), National Association for Sustainable Agriculture Australia (NASAA) Certified Organic or Demeter Certified Organic seed fibres or other international certified organic schemes recognized by GreenTag are deemed to have fulfilled this requirement.

ii. Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat):

- a. The sum total content of the following substances shall not exceed 0.5 ppm: γ -hexachlorocyclohexane (lindane), α -hexachlorocyclohexane, β -hexachlorocyclohexane, δ -hexachlorocyclohexane, aldrin, dieldrin, endrin, p,p'-DDT, p,p'-DDD.
- b. The sum total content of the following substances shall not exceed 2 ppm: diazinon, propetamphos, chlorfenvinphos, dichlofenthion, chlorpyrifos, fenclorphosq.
- c. The sum total content of the following substances shall not exceed 0.5 ppm: cypermethrin, deltamethrin, fenvalerate, cyhalothrin, flumethrin.
- d. The sum total content of the following substances shall not exceed 2ppm: diflubenzuron, triflumuron, dicyclanil.

The test should be made on raw wool, before it comes through any wet treatment, for each lot of wool or two times a year if more than two lots of wool per year are received.

These requirements (as detailed in points a, b, c and d) and taken separately, do not apply if documentary evidence can be presented that establishes the identity of the farmers producing at least 75 % of the wool or keratin fibres in question, together with a declaration from these farmers that the substances listed above have not been applied to the fields or animals concerned.

Sampling must be taken on a representative basis as outlines in International Wool Textile Organisation (IWTO) Standard 59 -(IWTO-59) Method for Determination of Chemical Residues on Greasy Wool. Demeter Certified Organic (DCO), National Association for Sustainable Agriculture Australia (NASAA) Certified Organic or Australian Certified Organic (ACO) fibres are deemed to have fulfilled this requirement.

iii. Acrylic fibres:

Residual acrylonitrile content in raw fibres leaving the fibre production plant shall be less than 1.5 mg/kg.

iv. Man-made cellulose fibres

Pulp used to manufacture fibres shall be bleached without the use of elemental chlorine. The resulting total amount of chlorine and organically bound chlorine in the finished fibres (OX) shall not exceed 150 ppm or in the wastewater from pulp manufacturing (AOX) shall not exceed 0.170 kg/ADt pulp. The Applicant shall demonstrate compliance with either the OX or the AOX requirement using the appropriate test method: ISO 11480 (controlled combustion and microcoulometry) or equivalent.

v. Polyester:

The amount of antimony in the polyester raw fibres shall not exceed 260 ppm prior to any wet processing. Polyester fibres manufactured from post-consumer recycled PET bottles are derogated from this requirement.

vi. Polypropylene:

Lead-based pigments shall not be used.

vii. Skins and Leather

- a) The average concentration of chromium (VI) in finished skins and leather must not exceed 3 ppm according to test analysis performed using ISO 17075, or equivalent;
- b) Residual concentrations of arsenic, cadmium or lead in the end product must be below detection limits with test analysis performed using ISO 17072-1 or equivalent;
- c) Free and hydrolysable Formaldehyde levels shall not exceed 30 ppm for products potentially in contact with skin and 300ppm for all other products according to test analysis performed using or ISO 17226-1 or ISO 17226-2 or equivalent.

viii. Fillings

Any filling materials consisting of textile fibres shall comply with the textile fibre criteria wherever appropriate.

ix. Accessories (non textile metal and plastic components)**a. Nickel containing metal accessories**

Migration limits of 0.5 µg/cm²/week shall apply to nickel containing alloys are in direct and prolonged contact with the skin

b. Heavy metals

Assessed under Appendix 1: ESCAP

c. Phthalates

For any plastic accessories DEHP (Bis-(2-ethylhexyl)-phthalate), BBP (Butylbenzylphthalate), DBP (Dibutylphthalate), DMEP (Bis(2-methoxyethyl) phthalate, DIBP (Diisobutylphthalate), DIHP (Di-C6-8-branched alkylphthalates), DHNUP (Di-C7-11-branched alkylphthalates) and DHP (Di-n-hexylphthalate) shall not be used.

For children's clothing, where there is a risk that the accessory may be placed in mouth – DINP (Di-isononyl phthalate), DIDP (Di-isodecyl phthalate) and DNOP (Di-n-Octyl phthalate) shall not be used.

9.5.4 Controlled Substances and Processes

- a) Products that are manufactured using wet treatment and dye absorption processes, and the like; physical testing e.g., mass spectrometertesting may be required in order to get full declaration of substances present in the final product.
- b) Compliance with these criteria can be demonstrated with a valid current recognised ecolabel certificate

i) Restricted Processes and Chemicals:**Surfactants, Fabric Softeners and Complexing Agents:**

At least 95% by weight of fabric softeners, complexing agents and surfactants shall be readily biodegradable under aerobic conditions, or inherently biodegradable or eliminable in wastewater treatment plants. All non-ionic or cationic surfactants shall also be readily biodegradable under anaerobic conditions.

Sizing agents

At least 95% (by dry weight) of the component substances used in sizing preparations shall be readily biodegradable.

Spinning Solutions and additives, Preparation agents and Detergents:

Shall not include formaldehyde based compounds and at least 90% (by dry weight) of the component substances shall be 'readily biodegradable, inherently biodegradable or eliminable in waste water treatment plants' according to relevant international Standards. This does not apply to secondary spinning (e.g. spinning lubricants, conditioning agents), coning oils, warping and twisting oils, waxes, knitting oils, silicone oils and inorganic substances.

Elastane:

Organotin compounds shall not be used.

Formaldehyde:

The amount of free and partly hydrolysable formaldehyde in the final fabric shall not exceed 20 ppm in products for babies and young children under 3 years old, 30 ppm for products that come into direct contact with the skin, and 75 ppm for all other products according to test method: ISO 14184-1 or equivalent. This requirement does not apply to leather and skins.

Printing pastes:

Shall not contain more than 5 % total volatile organic compounds. Applicants can provide manufacturer's declaration of VOCs in g/l as evidence to this criterion.

Flame retardants:

Only flame retardants that are chemically bound into the polymer fibre or onto the fibre surface (reactive flame retardants) may be used in the product. If the flame retardants used are assigned any ESCAP Category 1 H statements these reactive flame retardants should, on application, change their chemical nature to no longer warrant classification under any of these H statements. (Less than 0.1 % of the flame retardant on the treated yarn or fabric may remain in the form as before application.) Flame retardants which are only physically mixed into the polymer fibre or into a textile coating are excluded (additive flame retardants).

Fabrics Finishes:

The word "finishes" covers all physical or chemical treatments (except Insect Resistance Treatments) giving to the textile fabrics specific properties such as softness, waterproof, easy care. No use is allowed of finishing substances or of finishing preparations containing more than 0.1 % by weight of substances that are assigned or may be assigned at the time of application any ESCAP Category 1 H Statements classified as very toxic, toxic, carcinogenic, mutagenic or toxic for reproduction. This does not apply to substances specifically addressed in other sections of this standard.

- Anti felting finishes: Halogenated anti felting substances or preparations shall only be applied to wool slivers and loose scoured wool.

ii) Banned Processes and Chemicals

- a) Short-chained chlorinated paraffins of carbon chain length C10- C13 atoms;
- b) Perfluorinated alkyl sulfonates (PFAS): perfluorinated carboxylic acids (PFCA) including Perfluorooctanoic Acid (PFOA) and related substances listed in the OECD "Preliminary lists of PFOS, PFAS, PFOA, PFCA, related compounds and chemicals that may degrade to PFCA (as revised in 2007)" are not permitted in the product;
- c) Sulphonated phenolic stainblockers shall not be used;
- d) Brominated paraffin flame retardants;
- e) Organotin compounds and antimony oxides;
- f) Phthalates DEHP, DBP, BBP or DAP;
- g) Chlorophenols (their salts and esters), PCB and organotin compounds shall not be used during transportation or storage of products and semi-manufactured products;
- h) Heavy metal salts (except of iron) or formaldehyde shall not be used for stripping or depigmentation;
- i) Alkylphenoxyethoxylates (APEOs), linear alkylbenzene sulfonates (LAS), bis(hydrogenated tallow alkyl) dimethyl ammonium chloride (DSDMAC), distearyl dimethyl ammonium chloride (DSDMAC), di(hardened tallow) dimethyl ammonium chloride (DHTDMAC), ethylene diamine tetra acetate (EDTA), and diethylene triamine penta acetate (DTPA) shall not be used and shall not be part of any preparations or formulations used;
- j) Chlorine agents are excluded for bleaching yarns, fabrics and end products. This requirement does not apply to the production of man-made cellulose fibres;
- k) Chrome Mordant Dyeing;
- l) Halogenated carriers for polyester;
- m) Plastisol-based printing is not allowed;
- n) Coatings, laminates and membranes: Products made of polyurethane shall not contain organic tin; Products shall also not contain plasticisers or solvents that are assigned any ESCAP Category 1 H statements.

iii) Dyes:

a) All Dyes used shall comply with ESCAP as per Appendix 1. The following dyes shall not be used:

C.I. Basic Red 9	C.I. Basic Violet 14	C.I. Direct Blue 6
C.I. Disperse Blue 1	C.I. Disperse Orange 11	C.I. Direct Red 28
C.I. Acid Red 26	C.I. Direct Black 38	C.I. Disperse Yellow 3

b) **Dyes and pigments listed on the candidate or authorisation list of Substances of Very High Concern (SVHC):** No use of Dyes or pigments that are on the candidate list or authorisation list of SVHC. The following dyes shall not be used:

C.I. Pigment Red 104	C.I. Pigment Yellow 41 (pyrochlore, antimony lead yellow)	C.I. Basic Violet 3 (with >0.1% of Michler's keton or Michler's Base)
C.I. Pigment Yellow 34	C.I. Solvent Blue 4 (with >0.1% of Michler's keton or Michler's Base)	C.I. Basic Blue 26 (with >0.1% of Michler's keton or Michler's Base)

c) **Potentially Sensitizing Dyes:** No use of dyes that are potentially sensitizing. The following dyes shall not be used:

Dye Name	CI -No	Dye Name	CI -No
—C.I. Disperse Blue 1		—C.I. Disperse Orange 37	
—C.I. Disperse Blue 3	C.I. 61 505	—C.I. Disperse Orange 76 (previously Orange 37)	
—C.I. Disperse Blue 7	C.I. 62 500	—C.I. Disperse Red 1	C.I. 11 110
—C.I. Disperse Blue 26	C.I. 63 305	—C.I. Disperse Red 11	C.I. 62 015
—C.I. Disperse Blue 35		—C.I. Disperse Red 17	C.I. 11 210
—C.I. Disperse Blue 102		—C.I. Disperse Yellow 1	C.I. 10 345
—C.I. Disperse Blue 106		—C.I. Disperse Yellow 3	—
—C.I. Disperse Blue 124		—C.I. Disperse Yellow 9	C.I. 10 375
—C.I. Disperse Brown 1		—C.I. Disperse Yellow 39	
—C.I. Disperse Orange 1	C.I. 11 080	—C.I. Disperse Yellow 49	
—C.I. Disperse Orange 3	C.I. 11 005		

d) **AZO dyes:** Dyes that may cleave to aromatic amines that are known to be carcinogenic, listed in the following table shall not be used.

Substance	CAS number
4-aminodiphenyl	92-67-1
benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
4-amino-2',3-dimethylazobenzene	97-56-3
2-amino-4-nitrotoluene	99-55-8
4-chloroaniline	106-47-8
2,4-diaminoanisole	615-05-4
4,4'-diaminodiphenylmethane	101-77-9
3,3'-dichlorobenzidine	91-94-1
3,3'-dimethoxybenzidine	119-90-4
3,3'-dimethylbenzidine	119-93-7
3,3'-dimethyl-4,4'diaminodiphenylmethane	838-88-0
4-cresidine	120-71-8

4,4'-methylene-bis-(2-chloroaniline)	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
2-aminotoluene	95-53-4
2,4-diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7
2-methoxyaniline	90-04-0
4-aminoazobenzene	60-09-3
2,4-Xylidine	95-68-1
2,6-Xylidine	87-62-7

The textile products shall be tested to ISO 14362-1 and ISO 14362-3.

The final leather products shall be tested to ISO 17234-1 and 2.

e) The following table is an indicative list of dyes that may cleave to carcinogenic aromatic amines

Disperse dyes

Disperse Orange 60	Disperse Yellow 7	Disperse Red 221	Disperse Yellow 218
Disperse Orange 149	Disperse Yellow 23	Disperse Red 151	Disperse Yellow 56

Basic dyes

Basic Brown 4	Basic Red 114	Basic Red 76	Basic Yellow 103
Basic Red 42	Basic Yellow 82	Basic Red 111	

Acid dyes

C.I. Acid Black 29	CI Acid Orange 24	CI Acid Red 26:2	CI Acid Red 116	CI Acid Red 158
CI Acid Black 94	CI Acid Orange 45	CI Acid Red 35	CI Acid Red 119:1	CI Acid Red 167
CI Acid Black 131	CI Acid Red 4	CI Acid Red 48	CI Acid Red 128	CI Acid Red 170
CI Acid Black 132	CI Acid Red 5	CI Acid Red 73	CI Acid Red 115	CI Acid Red 264
CI Acid Black 209	CI Acid Red 8	CI Acid Red 85	CI Acid Red 128	CI Acid Red 265
CI Acid Black 232	CI Acid Red 24	CI Acid Red 104	CI Acid Red 135	CI Acid Red 420
CI Acid Brown 415	CI Acid Red 26	CI Acid Red 114	CI Acid Red 148	CI Acid Violet 12
CI Acid Orange 17	CI Acid Red 26:1	CI Acid Red 115	CI Acid Red 150	

Direct dyes

Direct Black 4	Direct Blue 6	Direct Brown 31	Direct Red 17	Direct Red 39
Direct Black 29	Direct Blue 8	Direct Brown 33	Direct Red 21	Direct Red 44
Direct Black 38	Direct Blue 9	Direct Brown 51	Direct Red 24	
Direct Black 154	Basic Brown 4	Direct Brown 59	Direct Red 26	
Direct Blue 1	Direct Brown 6	Direct Brown 74	Direct Red 22	
Direct Blue 2	Direct Brown 25	Direct Brown 79	Direct Red 28	
Direct Blue 3	Direct Brown 27	Direct Red 13	Direct Red 37	
Direct Blue 10	Direct Blue 192	Direct Brown 223	Direct Red 1	Direct Violet 1
Direct Blue 14	Direct Blue 201	Direct Green 1	Direct Red 2	Direct Violet 4
Direct Blue 15	Direct Blue 215	Direct Green 6	Direct Red 7	Direct Violet 12
Direct Blue 21	Direct Blue 295	Direct Green 8	Direct Red 10	Direct Violet 13

Direct Blue 22	Direct Blue 306	Direct Green 8.1	Direct Red 46	Direct Violet 14
Direct Blue 25	Direct Brown 1	Direct Green 85	Direct Red 62	Direct Violet 21
Direct Blue 35	Direct Brown 1:2	Direct Orange 1	Direct Red 67	Direct Violet 22
Direct Blue 76	Direct Brown 2	Direct Orange 6	Direct Red 72	Direct Yellow 1
Direct Blue 116	Direct Brown 95	Direct Orange 7	Direct Red 126	Direct Yellow 24
Direct Blue 151	Direct Brown 101	Direct Orange 8	Direct Red 168	Direct Yellow 48
Direct Blue 160	Direct Brown 154	Direct Orange 10	Direct Red 216	
Direct Blue 173	Direct Brown 222	Direct Orange 108	Direct Red 264	

- f) **Metal complex dyes:** based on copper, lead, chromium or nickel shall not be used for any fabrics used in mattresses or bedding materials
- g) **Impurities in dyes:** Colour matter with fibre affinity (soluble or insoluble)
 The levels of ionic impurities in the dyes used shall not exceed the following:
 Ag 100 ppm; As 50 ppm; Ba 100 ppm; Cd 20 ppm; Co 500 ppm; Cr 100 ppm; Cu 250 ppm; Fe 2500 ppm; Hg 4 ppm; Mn 1000 ppm; Ni 200 ppm; Pb 100 ppm; Se 20 ppm; Sb 50 ppm; Sn 250 ppm; Zn 1500 ppm
 Any metal that is included as an integral part of the dye molecule (e.g. metal complex dyes, certain reactive dyes, etc.) shall not be considered when assessing compliance with these values, which only relate to impurities.
- h) **Impurities in Pigments:** Insoluble colour matter without fibre affinity:
 The levels of ionic impurities for pigments used shall not exceed the following: As 50 ppm; Ba 100 ppm, Cd 50 ppm; Cr 100 ppm; Hg 25 ppm; Pb 100 ppm; Se 100 ppm; Sb 250 ppm; Zn 1000 ppm.

9.5.5 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, Applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme to which the product is assessed; see the Matrix 5 Series under section 5.4 for a list of schemes available to Product Assessors.

9.6 Carpets and Floor Coverings Supplementary Standard

Scope

This standard is applicable to carpet underlays and floor coverings laid on top of a floor structure and are not part of the building structure.

This applies to both LCARate and GreenRate certification.

Definitions

For the purposes of product certification under this Supplementary Standard, the following definitions apply:

Carpets – floor coverings, usually of woven, knitted or needle-tufted fabric, commonly installed with tacks or staples, or by adhesives. This product segment includes carpets in roll form, modular carpets (i.e. carpet tiles and sheet goods), rugs, mats, runners, textile sports surfaces, and similar products.

Underlays – backing material for floor coverings (e.g. felt, rubber, cork, foam, non-woven products, etc)

Timber Flooring – floor coverings made from timber, which includes solid timber flooring, laminate timber flooring and similar products

Hard Flooring – hard coverings for internal or external use, without any relevant structural function. This product segment includes:

- **Ceramic tiles** – thin slabs from clay and/or other inorganic raw materials such as feldspar and quartz
- **Natural stone** – natural occurring rock, such as marble, granite. Other natural stones that do not readily take a mirror polish, such as sandstone, quartzite, slate, tuff and schist are also considered under this classification
- **Terrazzo tiles** – suitably compacted element of uniform shape and thickness made of granulates embedded in cement and water, which may be single or dual-layered with a concrete backing
- **Agglomerated stones** – flooring made from a mixture of natural stone grit and a binder. Artificial stones and compacted marble also fall under this classification.
- **Concrete and cement-based tiles** – outer floor coverings obtained by mixing and vibro-compressing sands, gravel, cement, inorganic pigments and additives. Polished concrete will be assessed under Supplementary Standard 7.9 Paints & Coatings

Plastic Composite Decking – floor coverings made of composite materials (e.g. wood fibre/wood flour-plastic, natural fibre-plastic) which may also contain other ligno-cellulosic and inorganic filler materials

Resilient Flooring – floor coverings that show an ability to recover after a certain level of compression, and can be used to cover a floor from wall to wall. This product segment includes synthetic flooring surfaces, such as vinyl, linoleum, cork, rubber or poured urethane sports flooring, seamless flooring or surface treatment systems (laid in liquid form, which then hardens, and impact or shock-absorbing surfaces).

Exclusions & Notes

The VOC emissions for adhesives and sealants used for carpets and floor coverings will be covered by Supplementary Standard 9.8 in all instances, except when specific adhesive or sealant is recommended by the manufacturer and stipulated for use in the product warranty. In this case, VOC emissions limits for the adhesives or sealants will apply as in 9.6.2 ii) of this Supplementary Standard.

The VOC requirements outlined in this Supplementary Standard do not apply to hard flooring or solid timber flooring.

9.6.1 Fit for Purpose:

i. Carpets and Underlays:

Shall meet one or more of the following standards:

- a) ACCS Technical Specifications for its intended application. Evidence of Certification must be less than 2 years old or demonstrate that the main construction parameters of the product remain within 5% manufacturing tolerance of the original specification registered with the ACCS. This requires the licensee to have the product tested at a NATA registered laboratory to the requirements of the ACCS Abbreviated Quality Assurance Test Package or other system considered equal by GreenTag;
- b) Woolmark, Woolmark Blend or Wool Blend product specifications for its intended application unless demonstrated unnecessary and not required by code/regulation;
- c) AS 4288-2003 (R2016) Soft underlays for textile floor coverings , where relevant;
- d) NCC BCA section C1.10a Fire Hazard Properties – Floors, Walls , and Ceilings;
- e) AS/NZS 4586:2013 – Slip resistance classification of new pedestrian surface materials. Note that for internal textile floor coverings, dry pendulum slip resistance testing will be accepted;

OR

- f) The product meets or exceeds other internationally accepted standard relevant to any market/s it is to be exported to.

OR

- g) The Applicant must provide independent reporting demonstrating that the product meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

ii. Hard Flooring:

Shall meet or exceed the following fitness-for-purpose standards:

- a) AS/NZS 4586:2013 Slip resistance classification of new pedestrian surface materials – wet pendulum test method

AND

Subsequent verification of final slip ratings according to:

- b) HB 198:2014 Guide to the specification and testing of Slip Resistance of Pedestrian surfaces

AND

- c) Accelerated wear testing results using the Taber Abrasion Machine after a minimum of 1000 cycles in accordance with ASTM C1353 must be provided

OR

- d) The product meets or exceeds other internationally accepted standard relevant to any market/s it is to be exported to.

OR

- e) The Applicant must provide independent reporting demonstrating that the product meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

iii. Resilient Flooring:

Shall meet or exceed the following fitness-for purpose standards:

- a) AS/NZS 4586:2013 Slip resistance classification of new pedestrian surface materials

AND

Subsequent verification of final slip ratings according to:

- b) HB 198:2014 Guide to the specification and testing of slip resistance of pedestrian surfaces

OR

- c) The product meets or exceeds other internationally accepted standard relevant to any market/s it is to be exported to.

OR

- d) The Applicant must provide independent reporting demonstrating that the product meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

9.6.2 Life Cycle Issues

All products assessed under this standard must also meet the following Life Cycle related requirements:

i. Emissions to Air: Manufacturing

Carpets and Underlay

Emissions to Air requirements from manufacturing for fibre-based carpet products shall be in accordance with limits shown in the Textiles, Fibres, Skins and Leather Supplementary Standard section 9.5.2 i) Emissions to Air: manufacturing.

Hard Flooring

Emissions to Air requirements for natural stone hard flooring shall be in accordance with limits shown in section 3 Finishing Operations of 2009/607/EC (EU Ecolabel).

Emissions to Air requirements from manufacturing for processed hard flooring products (ceramic tiles, terrazzo tiles, agglomerated stones, terrazzo tiles, cement & concrete-based tiles) shall be in accordance with limits shown in section 4.3 2009/607/EC (EU Ecolabel).

Equivalent testing methods or standards, such as emissions to air results estimated in accordance with the relevant NPI Emission Estimation Technique Manual/s may also be deemed to satisfy this requirement upon assessment and verification.

ii. Emissions to Air: Indoor Air Quality

VOCs for Carpets, Underlays:

All Level **A**, **B**, or **C8** Certified carpets and underlays must comply as a minimum with TVOC emissions test protocols (or equivalent testing methods, upon assessment and verification) and limits stipulated below.

Test Protocol	Limit
ASTM D5116 - Total VOC limit	0.5mg/m ² per hour
ASTM D5116 – 4-PC (4-Phenylcyclohexene)	0.05mg/m ² per hour
ISO 16000* / EN 13419 – TVOC at 3 days	0.5mg/m ² per hour
ISO 10580 / ISO/TC 219 (Document N238) – TVOC at 24 hours	0.5mg/m ² per hour

*parts 9, 10, 11

Carpets certified to ACCS ECS Levels 2, 3 and 4 are deemed to satisfy this requirement.

Other indoor air quality certifications such as Green Label Plus™, UL GreenGuard, UL GreenGuard Gold, FloorScore®, Eurofins Indoor Air Comfort, Eurofins Indoor Air Comfort Gold, AgBB, etc. may satisfy this requirement upon assessment and verification. Refer to clause 3.21 (xii).

VOCs for Laminate Timber Flooring:

Level **A**, **B** or **C8** laminate timber flooring products must comply with the VOC emissions limits above.

VOCs for Composite Flooring:

Level **A**, **B** or **C8** composite flooring products must comply with the VOC emissions limits above.

VOCs for Resilient Flooring:

Level **A**, **B** or **C8** Resilient flooring products must comply with the VOC emissions limits above.

Other indoor air quality certifications such as Green Label Plus™, UL GreenGuard, UL GreenGuard Gold, FloorScore®, Eurofins Indoor Air Comfort, Eurofins Indoor Air Comfort Gold, AgBB, etc. may be deemed to satisfy this requirement upon assessment and verification.

In addition, total VOC content for **seamless flooring or surface treatment systems** (chemical product composition in its liquid form) must be:

- a) be <5% by wt. in total
- OR
- b) be a max of 2 g/m² treated surface in total.

Semi- Volatile organic compounds:

To achieve WELL v2 Feature X10 Part 2 credit recognition, “flooring products, including resilient and hard flooring and carpet shall contain total phthalates at less than 100ppm or the extent allowable by local code”.

iii. Emissions to Natural Water System**Carpets and Underlay**

Where water-based emissions flow to natural water bodies or eventually to a natural water body and is not treated before it enters natural water system, than natural fibre-based carpets as defined in the 7.5 Textiles, Fibres, Skins and Leather Supplementary Standard shall comply with the Emissions to Water requirements shown in 7.5.2.iii) Emissions to Water.

Hard Flooring

Emissions to Water requirements for natural stone hard flooring shall be in accordance with limits shown in section 3 Finishing Operations of 2009/607/EC (EU Ecolabel).

Emissions to Water requirements from manufacturing for processed hard flooring products (ceramic tiles, terrazzo tiles, agglomerated stones, terrazzo tiles, cement & concrete-based tiles) shall be in accordance with the relevant limits shown in section 4.4 2009/607/EC (EU Ecolabel).

Equivalent testing methods or standards, such as emissions to water estimated from mass balance or emissions factors may also be deemed to satisfy this requirement upon assessment and verification.

9.6.3 Material Qualities**ESCAP:**

In addition to the relevant product category requirements below, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

i. Carpets and Underlay

Carpet fibres must comply with all relevant material qualities stipulated in the Textiles, Fibres, Skins and Leather Supplementary Standard section 7.5.3, excluding carpet backing reinforcement made of fibre or metal (e.g. glass fibre scrim).

Carpets and underlays must comply with all relevant material qualities stipulated in the Textiles, Fibres, Skins and Leather Supplementary Standard section 7.5.4.

Foam underlays must comply with all relevant material qualities stipulated in the 7.10 Furniture Supplementary Standard Section 7.10.3 (vi) Foam and padding requirements.

ii. Resilient Flooring

Resilient flooring shall not use halogenated flame retardants.

iii. Plastic Composite Decking

Composite flooring products must contain recycled content (e.g. recycled wood flour or plastic)

9.6.4 Minimum Warranty Requirements

i. Carpets and Underlays

- a) Certified new and re-used modular carpet products must carry a minimum **2** year warranty for color fastness.
- b) Wool & all Residential Grade Broadloom carpets shall offer a standard product warranty of 10 years.
- c) Wool carpets must be treated against carpet moth and carpet beetle attack to the minimum requirements of the ACCS or Woolmark/ Woolmark Blend/Wool Blend specification, the Wool Interiors specification or required Wools of NZ rating, unless demonstrated unnecessary.

9.6.5 Design for Disassembly

Flooring products may allow for the use of specialist tools to facilitate disassembly.

9.6.6 Platinum, Gold or Silver LCARate Certification

In addition, the following requirements shall apply for **Platinum, Gold or Silver** LCARate products:

VOCs – Additional Requirements:

- a) Products assessed for **Platinum** or **Gold** LCARate Certification shall also comply with all individual VOC emissions limits for the chemicals of concern and TVOC emissions limits required by ACCS ECS (Environmental Certification Scheme)

OR

- b) Products assessed for **Platinum** or **Gold** LCARate Certification shall also comply with GreenLabel Plus™ OR other country based GBC indoor air quality rating tool requirements (e.g. LEEDv4, AgBB, French A class, FloorScore®, etc). *Note that this is not to imply that these are exactly equal standards.*

Warranty – Additional Requirements:

i) Hard Flooring

- a) Products assessed for Platinum LCARate Certification shall provide a minimum 15 year warranty;
- b) Products assessed for Gold LCARate Certification shall provide a minimum 10 year warranty.
- c) Products assessed for Silver LCARate Certification shall provide minimum 7 year warranty.

ii) Resilient Flooring

- a) Products assessed for Platinum LCARate Certification shall provide a minimum 10 year warranty with extended no waxing/no polish guarantee or a 15 year warranty;
- b) Products assessed for Gold LCARate Certification shall provide a minimum 10 year warranty.
- c) Products assessed for Silver LCARate Certification shall provide minimum 7 year warranty.

9.6.7 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, Applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level, to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

9.7 Mattress and Related Products Supplementary Standard

Mattresses, Mattress Pads and Mattress Protectors and associated items shall comply with the following requirements:

9.7.1 Fit for Purpose:

Mattresses shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
- ii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii. The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

OR

- iv. product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

9.7.2 Life Cycle Issues:

Emissions to Air: Manufacturing

In accordance with 9.5 Textiles and Fibres Supplementary Standard Section requirements as noted in section 7.5.2

(i) Emissions to Air: Manufacturing.

9.7.3 Emissions to Air: Indoor

VOCs:

Mattresses: The minimum standard for any Level A, B, or C8 Certified whole mattress product is GreenGuard equivalent or less than the emission criteria for bedding GGPS.001 or GGPS.002/ GGPS.EC.003 as detailed below: Products assessed for Silver, Gold or Platinum LCARate Certification shall also comply with all individual VOC limits required by GreenGuard and shown below or demonstrate the product does not contain the compounds required to generate the VOCs listed.

Individual VOCs ¹	Adult Mattress and Bedding Products ≤1/10 TLV and ≤CA chronic REL GGPS.001	Children's Mattress and Bedding Products ≤1/100 TLV and ≤1/2 CA chronic REL GGPS.002/ GGPS.EC.003
Formaldehyde	≤0.05ppm	≤0.0135 ppm (≤0.0165 mg/m ³)
Total VOCs ²	≤0.5 mg/m ³	≤0.22 mg/m ³
Total Aldehydes ³	≤ 0.1ppm	≤0.043 ppm
Total Phthalates ⁴	≤0.01 mg/m ³	≤0.01 mg/m ³

¹For Adults, any VOC not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV). For Child products VOCs not listed must produce an air concentration level no greater than 1/100 the TLV industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438) and/or no greater than 1/2 the CA Chronic Reference Exposure Level (CREL) http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html - (CRELs) Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHHA), February 2005).

²Defined to be the total response of measured VOCs falling within the C 6 – C16 range, with responses calibrated to a toluene surrogate.

³Defined to be the total response of a specific target list of aldehydes (2-butenal; acetaldehyde; benzaldehyde; 2,5-dimethylbenzaldehyde, 2-methylbenzaldehyde;3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

⁴Total phthalates include dibutyl (DBP), diethylhexyl (DEHD), diethyl (DEP), butylbenzyl (BBP), di-octyl (DOP), and dimethyl (DMP) phthalates.)..

Source: <http://www.aqsgreenguard.com/uploads/EmissionsCriteria/UpdatedLogos/GGPS.EC.003EmissionCriteriaBedding.pdf>
http://www.greenguard.org/en/technicalCenter/tech_standards.aspx#2

ii) Glues: The glues containing organic solvents shall not be used. (This criterion does not apply to glues used for occasional repairs). In this context, VOCs are any organic compound having at 293.15 K, a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use. The adhesive shall not be used that at the time of application fulfil the classification criteria of ESCAP Level 1 for Human Health H-Statements or R-phrases.

iii) Formaldehyde emission from untreated raw wood-based materials:

Composite wood-based materials are allowed in a mattress ensemble if they comply with the following requirements:

Particleboard or MDF: the emission of formaldehyde from particle boards in their raw state, i.e. prior to machining or coating, shall not exceed 50 % of the threshold value that would allow it to be classified as E1 according to standard EN 312-1 (equivalent to the minimum E0 threshold value)

9.7.4 Emissions to Water

In accordance with 7.5 Textiles and Fibres Supplementary Standard Section requirements as noted in section 7.5.2 (iii) Emissions to Water: Manufacturing.

9.7.5 Material Qualities

In accordance with Textiles and Fibres requirements as noted in section 9.5.2 and as follows:

ESCAP:

In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

Synthetic Latex coated Coconut Fibre:

Where a mattress has greater than 5% latex foam coated coconut fibre the following shall apply:

a) Extractable heavy metals:

The concentrations of the following metals shall not exceed the following values:

Table 9.5.1 Extractable Heavy metal content not to be exceeded:

Heavy Metal	Limit Concentration
— Antimony	0.5 ppm
— Arsenic	0.5 ppm
— Lead	0.5 ppm
— Cadmium	0.1 ppm
— Chromium (total)	1.0 ppm
— Cobalt	0.5 ppm
— Copper	2.0 ppm
— Nickel	1.0 ppm
— Mercury	0.02 ppm

Testing in accordance with the following test method: Milled sample extracted according to DIN 38414-S4, L/S = 10. Filtration with 0,45 µm membrane filter. Analysis by means of atomic emission spectroscopy with inductive coupled plasma (ICP-AES) or with hydride or cold vapour technique

b) Chlorophenols:

No chlorophenol (salts and esters) shall be present in concentrations exceeding 0,1 ppm, except mono- and di-chlorinated phenols (salts and esters) which shall not exceed 1 ppm. Assessment and verification: The Applicant shall provide a test report, using the following test method: Milling of 5 g sample, extraction of the chlorophenol or sodium salt. Analysis by means of gas chromatography (GC), detection with mass spectrometer or ECD.

c) Butadiene:

The concentration of butadiene shall not exceed 1 ppm.

Assessment and verification: The Applicant shall provide a test report, using the following test method: Milling and weighing of sample. Sampling by headspace sampler. Analysis by gas chromatography, detection by flame-ionisation detector.

d) Nitrosamines:

The concentration of N-nitrosamines shall not exceed 0.0005 mg/m³ as measured with the chamber test. Assessment and verification: The Applicant shall provide a test report, using the following test method: the chamber test (with conditions as in criterion 1(2) on formaldehyde)

PUR Foam

Where a mattress has greater than 5% PUR foam section 9.7.5 i) shall apply together with the following:

Blowing agents:

Halogenated organic compounds shall not be used as blowing agents or as auxiliary blowing agents in PUR foams.

9.7.6 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

9.7.7 Warranty

- a) Products assessed for Platinum LCARate Certification shall provide a min 7 year non pro-rata'd warranty;
- b) Products assessed for Gold LCARate Certification shall provide a min 5 year non pro-rata'd warranty;
- c) Products assessed for Silver LCARate Certification shall provide a min 4 year non pro-rata'd warranty;
- d) Products assessed for Bronze LCARate Certification shall provide a min 2 year non pro-rata'd warranty

9.8 Adhesives and Sealants Supplementary Standard

Scope

This supplementary standard applies to general purpose adhesive and sealants, acoustic sealants, architectural sealant, waterproofing compounds, membranes and sealants, fire retardant sealants and adhesives, structural glazing adhesive, grouts self-leveling compounds, wood flooring and laminate adhesives and sealants as well as others.

9.8.1 Fit for Purpose

Adhesives and Sealants for certification shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
- ii where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

OR

- iv. product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

9.8.2 Life Cycle Issues

- i) **Emissions to Air: Indoor**

VOCs:

The minimum standard for any Level A, B or C8 Certified product detailed below:

VOCs are to be in conformance with the grams per litre (g/L) content limits set out in the table below which have been adopted from South Coast Air Quality Management District (California, US) – Rule 1168. Emissions for each application must be acquired through recognized testing method and reported through a recognized datasheet.

Compliance Testing: The testing method for adhesive and sealants is ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475) and water content (D4017) but not excluding exempt compounds (D4457) and meets the value limit as indicated in Table 7.8.2a. For more information on ASTM D3960 refer to South Coast Air Quality Management District Rule 1168.

OR

As required by relevant rating tools

OR

Other acceptable VOC emission standard/s or recognised ecolabels which are relevant to any market/s, the product is exported to, or rating tools including, GreenGuard and Floorscore.

Theoretical Calculation: In the case of adhesives and sealants, theoretical TVOC calculations are also acceptable. The TVOC content of the ready-to-use product may also be calculated theoretically as the sum total of the VOCs of each of the raw material components comprising the product.

The calculation must include the following:

- Numerical TVOC results expressed in g/litre of product; and
- Statement that the results have been obtained based on the subtotal of the known TVOC values of product's raw ingredients.

Green Star Requirements:

The testing method for adhesive and sealants is the ASTM D3960 as detailed for paints as well as *South Coast Air Quality Management District Rule 1168*.

Table 9.8.2a Maximum TVOC limits for Adhesives and Sealants applied **onsite** (excludes adhesives and sealants used off-site, for example applied to furniture items in a manufacturing site and later installed in the fitout; and adhesives and mastics used for temporary formwork and other temporary installations)

Product Category	Max TVOC content in grams per litre (g/l) of ready to use product
Green Star Relevant certification, where onsite application is likely or possible	
General purpose adhesives and sealants	50
Sealers (Primers, sealers and prep coats)	65
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesives, wood flooring and laminate adhesives and sealants	100

LEED Requirements:

Adhesives, Sealants and Sealant Primers must comply with South Coast Air Quality Management District (SCAQMD) Rule #1168. Volatile organic compound (VOC) limits listed in the table below correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.

Architectural Applications	VOC Limit (g/L less water)	Specialty Applications	VOC Limit (g/L less water)
Indoor carpet adhesives	50	PVC welding	510
Carpet pad adhesives	50	CPVC welding	490
Wood flooring adhesives	100	ABS welding	325
Rubber floor adhesives	60	Plastic cement welding	250
Subfloor adhesives	50	Adhesive primer for plastic	550
Ceramic tile adhesives	65	Contact adhesive	80
VCT and asphalt adhesives	50	Special purpose contact adhesive	250
Drywall and panel adhesives	50	Structural wood member adhesive	140
Cove base adhesives	50	Sheet applied rubber lining operations	850
Multipurpose construction adhesives	70	Top and trim adhesive	250
Structural glazing adhesives	100		
Substrate Specific Applications	VOC Limit (g/L less water)	Sealants	VOC Limit (g/L less water)
Metal to metal	30	Architectural	250
Plastic foams	50	Roadway	250
Porous material (except wood)	50	Other	420
Wood	30		
Fiberglass	80		
Sealant Primers	VOC Limit (g/L less water)		
Architectural, nonporous	250		
Architectural, porous	775		
Other	750		

This table excludes adhesives and sealants integral to the water-proofing system or that are not building related.

VOC emissions evaluation

Option 1. Product has been tested according to California Department of Public Health (CDPH) Standard Method v1.2–2017 and complies with the VOC limits in Table 4-1 of the method. Additionally, the range of total VOCs after 14 days (336 hours) was measured as specified in the CDPH Standard Method v1.2 and is reported (TVOC ranges: 0.5 mg/m³ or less, between 0.5 and 5 mg/m³, or 5 mg/m³ or more). Laboratories that conduct the tests must be accredited under ISO/IEC 17025 for the test methods they use. Products used in school classrooms must be evaluated using the classroom scenario, products used in other spaces must be evaluated using the default private office scenario

The statement of product compliance must include the exposure scenario(s) used, the amount of wet-applied product applied in mass per surface area (if applicable), the range of total VOCs, and follow guidelines in CDPH Standard Method v1.2-2017, Section 8. Organizations that certify manufacturers' claims must be accredited under ISO Guide 17065.

Option 2. Product has been tested according to EN 16516:2017 and complies with the LCI values from Table 1 of the German AgBB Testing and Evaluation Scheme (2015) and a formaldehyde limit of 10 micrograms per cubic meter. Additionally, the range of total VOCs after 28 days was measured as specified in EN 16516 and reported (TVOC ranges: 0.5 mg/m³ or less, between 0.5 and 5 mg/m³, or 5 mg/m³ or more). Laboratories that conduct the tests must be accredited under ISO/IEC 17025 for the test methods they use.

The statement of product compliance must include the amount of wet-applied product applied in mass per surface area (if applicable) and the range of total VOCs. Organizations that certify manufacturers' claims must be accredited under ISO Guide 17065.

OR

VOC content evaluation for Adhesives and sealants:

- 1) SCAQMD Rule 1168, October 6, 2017
- 2) Canadian VOC Concentration Limits for Architectural Coatings (SOR/2009-264)
- 3) Hong Kong Air Pollution Control (VOC) Regulation for regulated adhesives and regulated sealants (April 2012)
- 4) Free of solvents, as defined in TRGS 610 (January 2011)

International WELL Building Rating Tools Requirements:

The VOC limits of newly applied interior adhesives and sealants meet one of the following requirements:

- 1) South Coast Air Quality Management District (SCAQMD) Rule 1168 for VOC content. Volatile organic compound (VOC) limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.
- 2) California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions
- 3) Applicable national VOC content regulations or conduct testing of VOC content in accordance with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2

9.8.3 Material Qualities

ESCAP: In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

9.9 Paints and Coatings Supplementary Standard

Scope

This standard applies to paints and coatings including architectural interior walls and ceilings paints and coatings, paints and coatings used in exterior applications, trim, varnishes, wood stains, lacquers, primers, sealers, prep coats, powder coating, industrial coatings, car paints and artist and student paints.

It does not apply to Personal Products e.g. face and body paints.

9.9.1 Fit for Purpose

Paints and coatings as noted in Table 9.9.1 shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
- ii where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii the product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other appropriate criteria.

OR

- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

9.9.2 Life Cycle Issues

i. Emissions to Air: Manufacturing

Ozone-depleting Substances in Industrial Solvents and Cleaning Agents:

The solvents used to clean the production equipment of architectural coatings must not contain ozone depleting substances.

Powder coating:

Powder coating shall not use Triglycidylisocyanurate (TGIC) unless TGIC exposure levels (8-hour TWA) at the powder coating manufacturing plant are below Occupational Exposure Limit of 0.05 mg/m³ air.

ii. Emissions to Air: Indoor

VOCs:

The minimum standard for any Level A, B or C8 Certified product is equivalent or less than the following emission levels for the various uses noted below:

Paint shall comply with the TVOC content as required by the most current version of GBCA Green Star requirements currently as follows (or other country based GBC rating tool requirements, e.g. LEEDv4):

The TVOC content of the 'ready-to-use' paint shall be theoretically calculated as the sum total of the VOCs of each of the raw material components comprising the paint. Where the TVOC content of individual components is not known, it must be determined experimentally by one of the following testing methods as appropriate:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890-2 (2013), for a material with a presumed VOC <15%;
- ISO Method 11890-1 (2007), for a material with a presumed VOC content >15%;

OR

- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475), water content (D4017), but not excluding exempt compounds (D4457)

OR

- Other country based GBC rating tool requirements, e.g. LEED v4.

The product(s) must comply with the following table:

Table 9.9.1: Max Paints and Coatings TVOC content

Product Type/Sub Category	(g/L of ready-to-use product)
Interior walls and ceiling paints, all sheens	16
One and two pack performance coatings for floors	140
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65

These VOC requirements do not apply to paints/coatings that are exclusively applied off-site.

The above VOC requirements do not apply to powder coatings.

iii. Biocides and preservatives:

Biocides and preservatives are allowed if they are authorised under Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012 and for which a risk assessment for professional and/or consumer (non-professional) use is provided in the Assessment Report. Applicants should consult the most current authorisation list. Preservatives for which a dossier has been submitted for evaluation pending a decision on authorisation or non-inclusion may be used in the interim period up until the adoption of the Decision may also be used.

Isothiazolinone compounds: The content of isothiazolinone compounds in the ready to use product shall not exceed 0.2% (m/m) for outdoor wood paints and varnishes and 0.05 % (m/m) for other paints and coatings.

The following biocides are **derogated** from this requirement provided they comply with the individual limits as follows:

- 2-methyl-2H-isothiazol-3-one: 0.020%
- 1,2-Benzisothiazol-2(2H)-one: 0.050%
- 2-octyl-2H-isothiazol-3-one: 0.050% (except for outdoor wood paints and varnishes which can contain higher concentrations)
- The content of the mixture of 5-chloro-2-methyl-2H-isothiazol-3-one (EC No 247-500-7) and 2-methyl-2H-isothiazol-3-one (EC No 220-239-6) shall not exceed 0.0015%.

iv. Packaging:

All plastic packaging containers must have a plastic resin identification code clearly imprinted on each container comprised entirely of materials able to be recycled and must not be treated in any manner that would prevent recycling.

9.9.3 Material Qualities:

i. ESCAP:

Products shall be assessed and pass the ESCAP process, shown in Appendix 1.

ii. White pigments:

White pigment content (white inorganic pigments with a refractive index higher than 1.8):

- Indoor wall and ceiling Paints shall have a white pigment content lower or equal to 40 g per m² of dry film, with 98 % opacity
- For tinting systems, the above requirement only applies to the base paint
- For reflective coatings, the white pigment content shall not exceed 50g/m²
- For all other architectural paints, including limed paints, silicate paints, primers, anti-rust paints and facade paints, the white pigment content shall not exceed 36 g/m² for indoor products and 38 g/m² for outdoor products. In the case of paints for both indoor and outdoor use the more stringent limit shall apply

Demonstration of compliance in accordance with the following test method: ASTM D4764-01(2016) or ISO 591-1:2000; or demonstrated mathematical calculation method (e.g. assessment showing the weight of titanium dioxide per litre of paint, coverage (m²/l) of paint and application instructions indicating the number of coats).

This requirement does not apply to varnishes, wood stains, and student and artist paints.

iii. Banned Ingredients

- a) Heavy metals: The following heavy metals or their compounds shall not be used as an ingredient of the product or tint (if applicable) (whether as a substance or as part of any preparation used): cadmium, lead, chromium VI, mercury, arsenic, barium (excluding barium sulphate), selenium, antimony.
- b) Cobalt shall also not be added as an ingredient with the exception of cobalt salts used as a siccative in alkyd paints. These may be used up to a concentration not exceeding 0.05 % (m/m) in the end product, measured as cobalt metal. Cobalt in pigments is also exempted from this requirement.
- c) It is accepted that ingredients may contain traces of these metals up to 0.01 % (m/m) deriving from impurities in the raw materials.
- d) Perfluorinated alkyl sulfonates (PFAS): perfluorinated carboxylic acids (PFCA) including Perfluorooctanoic Acid (PFOA) and related substances listed in the OECD "Preliminary lists of PFOS, PFAS, PFOA, PFCA, related compounds and chemicals that may degrade to PFCA (as revised in 2007)" are not permitted in the product.
- e) Formaldehyde: Free formaldehydes shall not be added. Formaldehyde donors may only be added in such quantities as will ensure that the resulting total content after tinting (if applicable) of free formaldehyde will not exceed 0.001 % (m/m) according to raw materials suppliers using the VdL-RL 03 test method (VdL Guide-line03) "In-can concentration of formaldehyde determined by the acetyl-acetone method" and calculations relating the data from these tests to the final product in order to indicate that the final maximum possible concentration of formaldehyde released by formaldehyde releasing substances is not higher than 0.001 % (m/m). Alternatively formaldehyde resulting from formaldehyde donors can be measured in the end product by using a standard based on High-performance liquid chromatography.
- f) Alkylphenolethoxylates (APEOs): APEOS shall not be used in the product before or during tinting (if applicable).
- g) Phthalates: di (2-ethylhexyl) phthalate (CAS 117-81-7), Butyl benzyl phthalate (CAS 85-68-7), di-n-butyl phthalate (CAS 84-74-2), di-n-octyl phthalate, diethyl phthalate (CAS 117-84-0), dimethyl phthalate (CAS 131-11-3), Di(methoxyethyl) phthalate (CAS 117-82-8), Diisobutyl phthalate (CAS 84-69-5), Di-C6-8-branched alkyl phthalates (CAS 71888-89-6), Di-C7-11-branched alkyl phthalates (CAS 68515-42-4), Dihexyl phthalate (CAS 84-75-3)
- h) Triclosan

9.10 Furniture Supplementary Standard

Scope

This standard applies to all indoor and outdoor home and office furniture products e.g. Office chairs, office desks and tables, sofas, couches, domestic chairs, domestic desks and tables, bedroom furniture, recycled furniture and similar variations.

There is some discretion in the application of this clause. Components up to 5% can be excluded from the assessment, if GreenTag deems that the composition of minor components is both obvious, non-controversial and not likely to trigger any issues of concerns, e.g. fixings, screws, etc (Adhesives and coatings must meet the required criterion). However, it shall be at absolute discretion of GreenTag if such information is required or not.

This standard excludes bedding and mattresses, see 9.7 Mattress and Related Products Supplementary standard.

9.10.1 Fit for Purpose

Furniture and Furniture components shall meet the relevant standards relating to the Product Supplementary Standard elsewhere in Appendix 2 and one or more of the following criteria:

i. Australian Standards:

where required under legislation, products for Certification shall comply with relevant Australian or other required standards, e.g.;

- AFRDI 109 - Components for Chairs
- AS/NZS 3813: Plastic Monobloc Chairs (Commercial level)
- AS/NZS 4438: Height Adjustable Swivel Chairs (Level 6)
- AS/NZS 4442: Office Desks
- AS/NZS 4443: Office Panel Systems - Workstations
- AS/NZS 4610.2 School and Educational - Chairs (Severe)
- AS/NZS 4610.3 School and Educational - Tables and Storage Furniture (Severe)
- AS/NZS 4688: Fixed Height Chairs (Level 6)
- AS 5079: Filing Cabinets

OR

ii. Internationally Recognized or Other Standards:

where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

iii. Market Acceptance:

The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

OR

iv. Country specific standards:

product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

AND

meet the following Life cycle related requirements:

9.10.2 Life Cycle Issues

Emissions to Air: Indoor

VOCs:

The minimum standards relevant to any Level A, B or C8 Certified product are:

VOCs- Components:

ASTM D5116-06 Small Scale Environment Chamber determination of organic emissions from indoor materials/products

OR

Or other country based GBC rating tool requirements, e.g. LEEDv4.

Table 7.10.1: Limit benchmarks for total VOCs in furniture items

Accepted Test Method		Small Chamber	Large Chamber
Testing Method		ASTM D5116-06	ASTM D6670-01
Fitout Item	Workstation	≤ 0.5 mg/item/hr	≤ 0.5 mg/item/hr
	Wall	≤ 0.5 mg/m ² /hr	≤ 0.5 mg/m ² /hr
	Panel	≤ 0.5 mg/m ² /hr	≤ 0.5 mg/m ² /hr
	Table	≤ 0.5 mg/item/hr	≤ 0.5 mg/item/hr
	Chair	≤ 0.5 mg/item/hr	≤ 0.5 mg/item/hr
	Storage Unit	≤ 0.5 mg/item/hr	≤ 0.5 mg/item/hr

Formaldehyde:

Formaldehyde emissions shall be limited to the requirements shown in section 7.4.4 Composite Wood: Formaldehyde emissions.

Semi- Volatile organic compounds:

To achieve WELL v2 Feature X10 Part 2 credit recognition, flooring, including resilient and hard surface flooring and carpet shall contain total phthalates at less than 100ppm or the extent allowable by local code.

9.10.3 Furniture Components

Product's components shall comply with relevant sections and as deemed applicable:

i. **Leather:**

(i) AFRDI Standard 146 or other recognised ecolabels

OR

(ii) In accordance with relevant leather requirements under 7.5 Textiles, Fibres, Skin and Leather Supplementary Standard

ii. **Timber Components:**

Timber or its primary derivatives must be FSC or AFS or PEFC certified or Post Consumer Recycled (Certified or Verified), or as a minimum certified legally sourced and must meets ESCAP requirements in Appendix 1.

iii. **Fabric or Textile Components:**

(i) Be certified by GreenTag, EU Flower ecolabel, or Nordic Swan ecolabel or other recognised ecolabels

OR

(ii) In accordance with all relevant sections of 9.5 Textiles, Fibres, Skin and Leather supplementary standard

iv. Adhesives and Sealants:

In accordance with 9.8 Adhesives and Sealants

v. Timber and Metal Coatings:

In accordance with section 9.9.2 Emissions to Air: Manufacturing and 9.9.3 Material Qualities of Paints and Coatings supplementary standard

vi. Foam and Padding Requirements:

Where furniture has greater than 5% of foam or padding, following requirements shall be fulfilled:

- (i) In accordance with 9.5 Textiles and Fibres Supplementary Standard Section requirements as noted in section 9.5.2 (i) Emissions to Air: Manufacturing
- (ii) Halogenated organic compounds shall not be used as blowing agents or as auxiliary blowing agents in PUR foams

9.10.4 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials. For Certification above Bronze LCARate level, they will also offer the following:

- a) Product Stewardship: A contractual agreement to take back the furniture at the end of its service life for re-use, recycling or re-processing is required; and
- b) Design for Disassembly: loose furniture that can be readily disassembled, using non-specialist tools, into elemental components for re-use, recycling or re-processing.

9.10.5 Gold or Platinum LCARate Certification

- a) A product or item can be considered for Platinum and Gold LCARate when:
 - i. it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled;
 - ii. Any upholstered furniture must include GreenTag Certified Fabrics or fabrics approved by other recognized ecolabel;
- b) A product or item can be considered for Silver and Bronze LCARate when:
 - i. it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled;
 - ii. Furniture submitted is 'white' or non-finished/upholstered furniture.

9.10.6 GreenRate 'White Furniture' or 'Finished Product' Certification

- a) A Level B product shall achieve GreenRate Level A when it is upholstered in GreenTag Certified Fabrics or fabrics approved by other recognized ecolabel;
- b) A product can be considered for GreenRate Level B or C when furniture submitted is 'white' or non-finished/upholstered furniture.

9.10.7 Warranty

Indoor & Outdoor Furniture Warranties:

All **GreenRate** products must provide a warranty of minimum 5 years on the quality of the product (provided the product is used as per its intended functional use).

For **LCARate**, Platinum and Gold levels must provide a warranty of minimum 7 years on the quality of the product (provided the product is used as per its intended functional use).

9.10.8 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, Applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	SA 8000
	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
5.1.08	90% Design for Disassembly
	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

9.11 Walls, Partitions and Ceilings Supplementary Standard

Scope

This standard applies to products used for walls, partitions and ceiling coverings used in interior fitout applications and applied on-site, as well as exterior siding or cladding.

This applies to both LCARate and GreenRate Certification.

Definitions

For the purposes of product certification under this Supplementary Standard, the following definitions apply:

Ceiling tiles/panels – tiles/panels made from various sizes and textures. This product segment includes acoustic ceiling tiles demonstrate sound-absorbing properties, and suspended ceiling tiles, which can be suspended from a ceiling grid. Ceiling tiles may be made of spun mineral fibres, fiberglass, metal, plastic, plasterboard, timber, rockwool, stainless steel, aluminium, among other materials.

Wall panels – wall coverings made from rigid or resilient material, including particleboards, fibreboards, plasterboard or gypsum boards, and boards made of plastic and other textile fibres, metals, glass, mineral fibre, fibreglass, engineered wood and natural fibre products

9.11.1 Fit for Purpose

- a) Where required under legislation, products for Certification shall comply with relevant Australian or other international standards, e.g.; NCC BCA section C1.10a Fire Hazard Properties-Floors, Walls and Ceilings:
- b) All components comprising Certified walls, partitions and ceilings shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2;
- c) Where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or other recognised international standards;

OR

- d) Product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

OR

- e) The Applicant must provide independent reporting demonstrating that the product meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

All products assessed under this standard must also meet the following Life Cycle related requirements:

9.11.2 Life Cycle Issues

i. Emissions to Air: Indoor Air Quality

VOCs for Walls and Partitions elements and finishes:

Materials comprising over 5% of a wall or partition by mass for Level **A**, **B** or **C8** with the GreenGuard Indoor Air quality standard materials thresholds as follows (or other country based GBC rating tool requirements, e.g. LEED v4):

Parameter	Limits
Total VOCs (TVOC) ¹	≤ 0.5 mg/m ³
Total Aldehydes ²	≤ 0.1 ppm
Individual VOCs ³	≤ 0.1 TLV

¹Defined to be the total response of measured VOCs falling within the C6 – C16 range, with responses calibrated to a toluene surrogate.

²Defined to be the total response of a specific target list of aldehydes (2-butenal; acetaldehyde; benzaldehyde; 2, 5-dimethylbenzaldehyde; 2-methylbenzaldehyde; 3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

³Any VOC not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV) industrial workplace standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).

VOCs for Paints and Coatings:

The minimum standard for any Level **A, B** or **C8** Certified product is as per section 9.9 Paints and Coatings

VOCs for Adhesives and Sealants:

The minimum standard for any Level **A, B** or **C8** Certified product is as per section 9.8 Adhesives and Sealants

VOCs for Fibre based components including textiles and ceiling tiles shall meet or exceed the minimum standard for any Certified product as per section 9.5.2.ii) Emissions to Air: indoor air quality, 9.6.2 ii) Emissions to Air: Indoor Air Quality and 9.6.6 Platinum, Gold or Silver LCARate Certification: VOCs: Additional requirements

Formaldehyde Content:

Structural and cladding products with added formaldehyde content (e.g. binders) shall comply with the requirements of the 9.4 Formaldehyde Content Supplementary Standard.

Ionising Radiation:

Products shall comply with the requirements stipulated in section 9.13 Radiation Protection, if relevant.

Semi- Volatile organic compounds:

To achieve WELL v2 Feature X10 Part 2 credit recognition wall coverings shall contain total phthalates at less than 100ppm or the extent allowable by local code.

ii. **Emissions to Water**

Fibre-based Components:

Fibre-based components shall comply with the relevant requirements in 9.5 Textiles, Fibres, Skins and Leather Supplementary Standard section 9.5.2iii) Emissions to Water.

9.11.3 Material Qualities

ESCAP:

In addition to the relevant product category requirements below, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

Timber components:

Timber components must meets ESCAP requirements listed in Appendix 1.

Fibre-based Components:

Fibre-based components within a Certified product shall comply with the requirements stipulated in section 9.14 Insulation.

Wall and Partition elements and finishes:

Polymer elements, e.g. structural insulated panels or insulation, shall comply with the requirements stipulated in section 9.14 Insulation.

9.11.4 Resource Efficiency

Applicants for Certification shall demonstrate a focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

9.11.5 Platinum, Gold or Silver LCARate Certification

In addition, the following requirements shall apply for **Platinum, Gold or Silver** LCARate products:

Product Stewardship:

A product stewardship program or contractual agreement to take back the product at the end of its service life for reuse, recycling or re-processing is required.

Design for Disassembly:

Design for disassembly, i.e. the product can be readily disassembled, using non-specialist tools, into elemental components for reuse, recycling or re-processing, must be demonstrated.

- a) A product is considered for Platinum LCARate when it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled.
- b) A product or item is considered for Gold LCARate when it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled

Formaldehyde emission limits:

- a) A product is considered for **Platinum** LCARate when it has a formaldehyde emission rate less than or equal to **Super E0** (E00 or F****).
- b) A product is considered for **Gold or Silver** LCARate when it has a formaldehyde emission rate less than or equal to **E0** (or F***).
- c) A product is limited to **Bronze** LCARate when it has a formaldehyde emission rate less than or equal to **E1** (F**).

9.11.6 GreenRate 'White Wall' or 'Finished Products' Certification

- a) A Level B product shall achieve GreenRate Level A when it is upholstered in GreenTag Certified Fabrics or fabrics approved by other recognized ecolabel;
- b) The structural component of the product can be considered for GreenRate Level B or C when it is submitted as 'white' or unfinished.

9.11.7 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, Applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
	SA 8000
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

9.12 Joinery Supplementary Standard

Scope

This supplementary standard applies to the following items: toilet partitions, shower partitions including shower screens, doors, bench seats, vanities, lockers, kitchens, laundry cupboards, shelving units, bumper rails, decorative trim, built-in wardrobes, cupboards, and internal stairs. In addition, all the items mentioned above must be custom made.

9.12.1 Fit for Purpose

- i) where required under legislation, products for Certification shall comply with relevant Australian or other required standards e.g.;
- ii) all components comprising Joinery shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2;
- iii) where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- i) The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

OR

- i) product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

9.12.2 Life Cycle Issues

i. Emissions to Air: Indoor

VOCs:

Adhesives and Sealants:

The minimum standard for any Certified product is as per section 9.8 Adhesives and Sealants.

VOCs for Paints and Coatings:

The minimum standard for any Level **A**, **B** or **C8** Certified product is as per section 9.9 Paints and Coatings.

Joinery and finishes:

Materials comprising over 5% of joinery by mass shall comply with the GreenGuard Indoor Air quality standard materials thresholds as noted in section 9.11.2 Walls and Partitions.

Fibre-based Components:

Fibre based components including acoustic panels etc if relevant shall meet or exceed the minimum standard for any Certified product as per section 9.6.2 ii) Emissions to Air: Indoor Air Quality and 9.6.6 Platinum, Gold or Silver LCARate Certification

Formaldehyde:

All joinery products shall comply with section 9.4 Composite Wood: Formaldehyde minimisation.

9.12.3 Gold or Platinum LCARate Certification formaldehyde emission limits

- a) A product or item is considered for Platinum LCARate when it has a formaldehyde emission rate less than or equal to Super E0 (E00 or F****).
- b) A product or item is considered for Gold or Silver LCARate when it has a formaldehyde emission rate less than or equal to E0 (or F***).
- c) A product or item is considered for Bronze LCARate when it has a formaldehyde emission rate less than or equal to E1 (F**).

9.12.4 Material Qualities

Timber components:

Timber components within a Certified product shall be post-consumer recycled or FSC, AFS or PEFC Certified or demonstrate an equivalent level of compliance.

9.12.5 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

For Certification above Bronze LCARate level, they will also offer the following:

- a) Product Stewardship: A contractual agreement to take back the furniture at the end of its service life for re-use, recycling or re-processing is required; and
- b) Design for Disassembly: can be readily disassembled, using non-specialist tools, into elemental components for re-use, recycling or re-processing.

9.12.6 Gold or Platinum LCARate Certification

- a) A product or item is considered for Platinum LCARate when it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled.
- b) A product or item is considered for Gold LCARate when it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled.

9.12.7 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, Applicants should submit evidence towards complying with the following criteria

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

9.13 Radiation Protection- Supplementary Standard

Scope

This standard applies to any product that contains materials derived from rock and soil.

Definitions

Dose criterion: Maximum accepted radiation activity level.

Activity concentration index: Index number representing the total radiation activity level of radionuclides ²²⁶Ra, ²³²Th, and ⁴⁰K.

The following exclusion level calculation for natural radionuclides applies to all building materials.

9.13.1 Gamma exposure due to building materials

The EU publication Radiation Protection 112, Radiological protection principles concerning the natural radioactivity of building materials (1999), using well-established results of room models, states a dose criterion.

In general products should emit natural levels approximately equal to the Typical activity concentration in Table 7.13 below.

Table 7.13.1 Typical activity concentrations of Common Building Materials

Material	Typical activity concentration (Bq kg ⁻¹)			Maximum activity concentration (Bq kg ⁻¹)		
	²²⁶ Ra	²³² Th	⁴⁰ K	²²⁶ Ra	²³² Th	⁴⁰ K
Most common building materials (may include by-products)						
Concrete	40	30	400	240	190	1600
Aerated and light-weight concrete	60	40	430	2600	190	1600
Clay (red) bricks	50	50	670	200	200	2000
Sand-lime bricks	10	10	330	25	30	700
Natural building stones	60	60	640	500	310	4000
Natural gypsum	10	10	80	70	100	200
Most common industrial by-products used in building materials						
By-product gypsum (Phosphogypsum)	390	20	60	1100	160	300
Blast furnace slag	270	70	240	2100	340	1000
Coal fly ash	180	100	650	1100	300	1500

Source: <https://ec.europa.eu/energy/sites/ener/files/documents/112.pdf>

Investigation levels can be derived for practical monitoring purposes. Because more than one radionuclide contribute to the dose, it is practical to present investigation levels in the form of an activity concentration index. The activity concentration index should also take into account typical ways and amounts in which the material is used in a building.

9.13.2 Calculation Methodology

A methodology which can be used to derive such indexes is described in Annex I of EU 112. The following activity concentration index (*I*) is derived for identifying whether a dose criterion is met:

$$I = \frac{C_{Ra}}{300 \text{ Bq kg}^{-1}} + \frac{C_{Th}}{200 \text{ Bq kg}^{-1}} + \frac{C_K}{3000 \text{ Bq kg}^{-1}}$$

Where C_{Ra} , C_{Th} , C_K are the radium, thorium and potassium activity concentrations (Bq kg^{-1}) in the building material.

The activity concentration index of a material shall not exceed the values shown in Table 7.13.2 below depending on the dose criterion and the way and the amount the material is used in a building (as described in Annex I of EU 112).

Table 7.13.2 Dose Criterion Values not to be exceeded

Dose criterion	0.3 mSv a ⁻¹	1 mSv a ⁻¹
Materials used in bulk amounts, e.g. concrete	$I \leq 0.5$	$I \leq 1$
Superficial and other materials with restricted use tiles, boards, etc.	$I \leq 2$	$I \leq 6$

If this condition for the index is verified, the radon concentration due to that building material is estimated to be less than the safe level of 200 Bq m⁻³.

9.13.3 Specific materials of note

- a) Flyash/slag and cement based mass materials such as concrete, blocks or bricks with Flyash or slag levels over 30% by mass;
- b) By-product phosphogypsum based products

9.14 Insulation Supplementary Standard

Scope

This standard applies to both thermal acoustic insulation and vibration damping insulation used in buildings, for plant and equipment, pipes, ducts, walls, partitions roofs and ceilings including composite insulation panels and tiles, joinery and other assemblages and is recognised by GBCA for Green Star® Materials Calculator (or other country based GBC rating tool requirements, e.g. LEEDv4), VOC and Formaldehyde credit certification.

9.14.1 Fit for Purpose

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards e.g.:

Thermal insulation:

- a) Australian National Construction Code,
- b) AS/NZS 4859.1: 2002 (or latest version):- Materials for the thermal insulation of buildings Part 1: 2002 General criteria and technical provisions, and
- c) AS 3999: 1992 (or latest version): Thermal insulation of dwellings – Bulk Insulation – Installation requirements
- d) AS/NZS 4200.1: 1994 (or latest version): Pliable building membranes and underlays – Materials
- e) AS/NZS 4200.2: 1994 (or latest version): Pliable building membranes and underlays – Installation requirements
- f) AS 4426: 1997 (or latest version): Thermal insulation of pipework, ductwork and equipment – Selection, installation and finish.
- g) AS 4508: 1999 (or latest version): Thermal resistance of insulation for ductwork used in building air conditioning

Acoustic insulation:

- a) AS/NZS 2499:2000 (or latest version) Acoustics – Measurements of sound insulation in buildings and of building elements – Laboratory measurement of room-to-room airborne sound insulation of a suspended ceiling with plenum above it.
- b) AS/NZS ISO 717.1:2004 (or latest version): Acoustics - Rating of sound insulation in buildings and of building elements - Airborne sound insulation

Vibration damping insulation:

- a) ASTM E756-05(2010): Standard Test Method for Measuring Vibration-Damping Properties of Materials
 - ii. all components comprising insulation shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2 subject to the application of specific clauses in this standard;
 - iii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;
- OR
- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.
- OR
- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

9.14.2 Life Cycle & Material Quality Issues

Certified insulation products will:

- a) exhibit one or more environmental or health benefit compared to a business as usual product that performs the same function;
- b) comply with section 4.00 LCARate and/or Section 5.00 GreenRate requirements at the relevant level of certification (Bronze, Silver, Gold, or Platinum and A, B, or C); and
- c) insulation materials shall comply with the relevant requirements below. If an insulation product does not fall under any of the following categories it may still be considered for certification
- d) provide advice on proper use of Personal Protective Equipment during installation. Provide copies of product handling information (also known as Safe Use Instruction Sheets) that is provided to installers or consumers as an advice to minimize discomfort and any risk during installation.

i. Polyester fibre insulation:

The polyester fibre must contain at least 75% recycled content (post industrial or post consumer) in total.

OR

Comply with textile product category standard requirements: (fibre quality, emissions to air during manufacturing).

ii. Man Made Vitrous Fibre (MMVF) insulation (including glass wool, slag wool, rock wool)

MMVFs shall comply with following requirements:

- Glass fibre shall have at least 65% post consumer or post industrial recycled content
- Slag wool shall have at least 70% post consumer or post industrial recycled content
- Other mineral fibre shall have at least 25% post consumer or post industrial recycled content.
- Fibres shall comply with biosolubility requirements as per Note Q European Regulation (CE) n° 1272/2008 updated by the Regulation (CE) n°790/2009

Refractory insulation for use **only** in industrial and high temperature applications is exempt from these requirements.

iii. Wool insulation

The wool fibres used must contain at least 80% post industrial or post consumer recycled content.

OR

Comply with relevant sections of Textile Supplementary Standard requirements

iv. Cotton insulation

The cotton fibres used must contain at least 85% post industrial or post consumer recycled content.

OR

Comply with relevant sections of Textile Supplementary Standard requirements

v. Wood fibre insulation (including cellulose insulation)

Raw materials derived from primary derivatives of wood, shall comply with the requirements set in the Appendix 1: ESCAP for wood for products assessed under GreenRate or SAC-5 for 'Timber Based Products' in LCARate OR be of recycled origin. Raw materials derived from secondary derivatives of wood are exempted from this clause.

Cellulose fibres shall contain at least 80% post consumer recycled content.

vi. Polystyrene insulation (extruded and expanded)

Polystyrene insulation shall contain at least 25% recycled content. This does not apply to composite/Structural Insulated Panels (SIPs).

vii. Coated insulation

Coated insulation interior products (eg. suspended ceiling) shall comply with the relevant requirements set for the insulation material in this standard as well as other relevant product category standards (eg walls partitions and ceilings).

9.14.3 Emissions to air**i. VOC**

VOC emissions for Product shall be below 0.5mg/m²/h (ASTM D5116 or ISO 16000-9 or 10 and 11) or comply with UL GREENGUARD emission limits or other country specific GBC recognized scheme.

ii. Formaldehyde emissions

Insulation products shall comply with at least one of the following requirements:

- Formaldehyde emissions shall be below 0.05ppm (ASTM D5116 or ISO 16000-9 or 10 and 11)
- Comply with UL GREENGUARD emission limits or other country specific GBC recognized scheme.
- Not contain formaldehyde based ingredients or materials.

iii. Ozone Depleting Potential

Insulation products that use ozone depleting substances during the manufacturing or installation/application process will not be certified.

Greenhouse Potential

Blowing agents used in insulation products shall have a global warming potential (GWP) equal or less than 25, measured over a 100 year time horizon.

9.14.4 Banned ingredients

The products shall not contain any of the following banned ingredients:

- Short-chained chlorinated paraffins of carbon chain length C10- C13 atoms
- Brominated paraffin flame retardants,
- Polybrominated diphenyl ether flame retardants,
- Additives or catalysts that contain tin, lead, mercury, cadmium or chromium
- Perfluorinated alkyl sulfonates (PFAS): perfluorinated carboxylic acids (PFCA) including Perfluorooctanoic Acid (PFOA) and related substances listed in the OECD "Preliminary lists of PFOS, PFAS, PFOA, PFCA, related compounds and chemicals that may degrade to PFCA (as revised in 2007)" are not permitted in the product;
- Phthalates: di (2-ethylhexyl) phthalate (CAS 117-81-7), butyl benzyl phthalate (CAS 85-68-7), di-n-butyl phthalate (CAS 84-74-2), di-n-octyl phthalate, diethyl phthalate (CAS 117- 84-0), dimethyl phthalate(CAS 131-11-3), di(methoxyethyl) phthalate (CAS 117-82-8), diisobutyl phthalate (CAS 84-69-5), di-C6-8-branched alkyl phthalates (71888-89-6), di-C7-11-branched alkyl phthalates (CAS 68515-42-4), dihexyl phthalate (CAS 84-75-3);
- Alkylphenol ethoxylates (APEOs);
- Halogenated organic compounds;
- Organotin compounds;
- Boric acid and disodium tetraborates.

9.15 Best Practice PVC

Scope

This standard applies to any PVC products that aim to achieve Green Star 'PVC Minimisation credit' under Best Practice Guidelines as outlined by Green Building Council of Australia.

9.15.1 Best Practice PVC verification

Global GreenTag is one of the GBCA's recognized product certification schemes. PVC products will be assessed in accordance with 'Green Star PVC credit – Auditor Verification Guidance'.

The currency for BPPVC assessments will be 3 years renewed annually on declaration. In the 4th year, the Applicants will have to re-certify BPPVC Products.

9.15.2 Reference documents

The assessment follows the requirements set in the following documents or the most recent version at the time.

The Green Star 'PVC' credit:

<https://www.gbca.org.au/uploads/156/2716/Green%20Star%20PVC%20Credit%20060511.pdf>

Auditor Verification Guidance: <https://www.gbca.org.au/green-star/revise-green-star-pvc-credit/2716.htm>

Background and outcomes of the PVC Minimisation Credit Review: <https://www.gbca.org.au/green-star/revise-green-star-pvc-credit/2716.htm>

Literature Review and Best Practice Guidelines for the Life Cycle of PVC Building Products:

<https://www.gbca.org.au/green-star/revise-green-star-pvc-credit/2716.htm>

9.16 Local Procurement

9.16.1 Scope: General

This standard is intended to promote the use of locally made products; to encourage and recognize the reduction of transport emissions; and to contribute to local employment.

9.16.1.1 Declaration of Local content

In order to qualify under this supplementary standard, Applicants or Manufacturers/Assemblers are required to declare to GreenTag, the amount of local content within the products with respect to:

- Raw materials content
- Labour used in the manufacturing
- Assembly and Manufacturing of the product
- Shareholding of the organization

9.16.1.2 Local Procurement

For GreenRate:

In order to comply with this standard, the manufacturing or assembling facility of the product **must** be located in the country the certification is intended for, and the majority of GGT determined Tier 1 suppliers must be located in that country.

The majority is defined as:

At least 51% of Tier 1 suppliers which contribute more than 1% of total product mass **AND** complying Tier 1 suppliers must make up at least 51% of total product mass.

For LCARate:

The product achieves recognition under LCARate, if it complies with one of the following:

- The country the certification is intended for is also the country of origin of each significant ingredient/component in the product and all (or virtually all) processes involved in the production/manufacturing of the product are in this country
- The product is assembled or significantly transformed in the country the certification is intended for and the scores are awarded when 51% or more of the cost of manufacturing and producing of the product is attributed to production/manufacturing processes that occurs within that country.

9.16.2 Scope: Australia

It is aimed to assist in achieving the Green Star 'Local Procurement' credit under 'Innovation Challenges' as outlined by the Green Building Council of Australia.

9.16.2.1 Declaration of Local content

In order to qualify under this supplementary standard, Applicants or Manufacturers/Assemblers are required to declare to GreenTag, the amount of local content within the products with respect to:

- Raw materials content
- Labour used in the manufacturing
- Assembly and Manufacturing of the product
- Shareholding of the organization

9.16.2.2 Local Procurement

For GreenRate:

In order to comply with this standard, the manufacturing or assembling facility of the product **must** be located in Australia, and the majority of GGT determined Tier 1 suppliers must be located in Australia.

The majority is defined as:

At least 50% of Tier 1 suppliers which contribute more than 1% of total product mass **AND** complying Tier 1 suppliers must make up at least 50% of total product mass.

For LCARate:

The product achieves additional recognition under LCARate, if it complies with one of the following:

- Australia is the country of origin of each significant ingredient/component in the product (as defined in section 255 of the Australian Consumer Law) and all (or virtually all) processes involved in the production/manufacturing of the product is in Australia (as defined in section 255 of the Australian Consumer Law) **OR** when certified by Australian Made® as “Product of Australia” or “Australian Product”
- The product is assembled or significantly transformed in Australia and the scores are awarded when 50% or more of the cost of manufacturing and producing of the product is attributed to production/manufacturing processes that occurs within Australia **OR** when certified by Australian Made® as “Made in Australia” or “Manufactured in Australia” or “Australian Made”.

9.16.3 Scope: South Africa

This standard is intended to promote the use of locally made products; to encourage and recognize the reduction of transport emissions; and to contribute to local employment. It is aimed to assist in achieving the Green Star ‘Local Sourcing’ material credit as outlined by the Green Building Council of South Africa.

9.16.3.1 Declaration of Local content

For **all** certification levels, Applicants or Manufacturers/Assemblers are required to declare to GreenTag, the amount of local content within the products with respect to:

- Raw materials content
- Labour used in the manufacturing
- Assembly and Manufacturing of the product
- Shareholding of the organization

9.16.3.2 Local Procurement

In order to achieve the recognition for Local Procurement supplementary standard, the products must meet the following criteria:

- The manufacturing or assembling facility of the Product is located in South Africa

Appendix 3: GreenTag Label 'Tag' Variant

(Note each element of this Tag is also provided individually and in different combinations as a certificate)

The image shows a GreenTag label template with a house-like shape. At the top is the GreenTag logo with 'ecospecifier global GREEN TAG CERTIFIED' and 'GOLD PLUS GreenRate | Level A'. Below this is a table with 'Green Tag EcoPOINT' (0.31) and 'GREENRATE LEVEL' (A). A section titled 'Sustainability Assessment Category - AVERAGE SCORES' lists six categories with scores: Building Synergy (n/a), Health & Ecotoxicity (0.25), Biodiversity (0.10), LCA Score (0.94), GHG = 0.5kgCO₂e/unit² (-0.35), and Social Responsibility (0.90). A note states 'Low Score = Better Performance (Score Range -1 to +1)'. At the bottom is a company information box with fields for Company Name, Product, Licence No., and Product Category, and the website ecospecifier.com.au. A comments section at the very bottom provides details on the GHG calculation and a reference to the website for more information.

Green Tag EcoPOINT	0.31
GREENRATE LEVEL <small>(GBCA Approved Scheme ID = A8)</small>	A

Sustainability Assessment Category – AVERAGE SCORES

Building Synergy	n/a
Health & Ecotoxicity	0.25
Biodiversity	0.10
LCA Score	0.94
GHG = 0.5kgCO ₂ e/unit ²	-0.35
Social Responsibility	0.90

Low Score = Better Performance (Score Range -1 to +1)

Company Name	Product A
Product	COM - 001 - 2011
Licence No.	Category A
Product Category	

ecospecifier global **GREEN TAG**
ecospecifier.com.au

Comments:
GHG figure based on cradle to gate LCA, calculated in accordance with ISO14064. The LCA study was conducted in accordance with the ISO 14040/44 standard and the draft Product Category Rules: A.
See website for more information and disclaimers.

Appendix 4: Certification Disclaimer

GreenTag warrants only that any product that has been Certified in accordance with this Standard meets the GreenTag^{Cert™} LCARate or GreenRate Certification Program criteria and except as expressly set out herein, GreenTag:

- i) Makes no warranty, express or implied as to any product that has been certified under the GreenTag^{Cert™} LCARate or GreenRate Certification program, including any warranty as to merchantability or fitness for any particular purpose and GreenTag expressly disclaims all other warranties.
- ii) Shall not be liable for any loss, injury, claim, liability or damage of any kind resulting in any way from any errors, omissions, content, information, opinions, or assessments contained in the GreenTag^{Cert™} LCARate or GreenRate Certification program, and
- iii) Shall not in any event be liable for any incidental, consequential, special, exemplary or punitive damages (including without limitation for lost data, lost profits or loss of goodwill) of any kind or nature arising out of the Certification of any product under the GreenTag^{Cert™} LCARate or GreenRate Certification program, whether such liability is asserted on the basis of contract, tort or otherwise, even if GreenTag has been made aware of the possibility of such loss or damage in advance.

Appendix 5: Rotterdam Convention Chemicals

Rotterdam Convention Chemical	(CAS number(s))
2,4,5-T and its salts and esters	93-76-5 (*)
Alachlor	15972-60-8
Aldicarb	116-06-3
Aldrin	309-00-2
Azinphos-methyl	86-50-0
Binapacryl	485-31-4
Captafol	2425-06-1
Carbofuran	1563-66-2
Chlordane	57-74-9
Chlordimeform	6164-98-3
Chlorobenzilate	510-15-6
DDT	50-29-3
Dieldrin	60-57-1
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	534-52-1
Dinoseb and its salts and esters	88-85-7 (*)
EDB (1,2-dibromoethane)	106-93-4
Endosulfan	115-29-7
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Fluoroacetamide	640-19-7
HCH (mixed isomers)	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane (gamma-HCH)	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	CAS numbers
Methamidophos	10265-92-6
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-5 (*)
Toxaphene (Camphechlor)	8001-35-2
Tributyl tin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Trichlorfon	52-68-6

Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	137-26-8, 1563-66-2, 17804-35-2
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6
Actinolite asbestos	77536-66-4
Anthophyllite asbestos	77536-67-5
Amosite asbestos	12172-73-5
Crocidolite asbestos	12001-28-4
Tremolite asbestos	77536-68-6
Commercial octabromodiphenyl ether (including Hexabromodiphenyl ether and Heptabromodiphenyl ether)	36483-60-0, 68928-80-3
Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)	32534-81-9, 40088-47-9
Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls	1691-99-2, 1763-23-1, 24448-09-7, 251099-16-8, 2795-39-3, 29081-56-9, 29457-72-5, 307-35-7, 31506-32-8, 4151-50-2, 56773-42-3, 70225-14-8
Polybrominated Biphenyls (PBBs)	13654-09-6, 27858-07-7, 36355-01-8
Polychlorinated Biphenyls (PCBs)	1336-36-3
Polychlorinated Terphenyls (PCTs)	61788-33-8
Short-chain chlorinated paraffins (SCCP)	85535-84-8
Tetraethyl lead	78-00-2
Tetramethyl lead	75-74-1
Tributyltin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Tris(2,3 dibromopropyl)phosphate	126-72-7

* Only the CAS numbers of parent compounds are listed. For a list of other relevant CAS numbers, reference may be made to the relevant Decision Guidance Document.

As updated from time to time, see live link: <http://www.pic.int/home.php?type=t&id=29&sid=30>.

Appendix 6: R-pharse to H statement Translation Guide

R-pharse	Description	H statement	Description
R1	Explosive when dry	None	
R2	Risk of explosion by shock, friction, fire or other sources of ignition	H200	Unstable explosive
		H205	May mass explode in fire
R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition	H201	Explosive; mass explosive hazard
		H202	Explosive; severe projection hazard
		H203	Explosive; fire, blast or projection hazard
R4	Forms very sensitive explosive metallic compounds	None	
R5	Heating may cause an explosion	H240	Heating may cause an explosion
		H241	Heating may cause a fire or explosion
		H242	Heating may cause a fire
R6	Explosive with or without contact with air	None	
R7	May cause fire	H204	Fire or projection hazard
		H242	Heating may cause a fire
		H251	Self-heating; may catch fire
		H252	Self-heating; in large quantities; may catch fire
R8	Contact with combustible material may cause fire	H270	May cause of intensify fire; oxidizer
R9	Explosive when mixed with combustible material	H271	May cause fire or explosion; strong oxidizer
R10	Flammable	H228	Flammable solid
		H226	Flammable liquid and vapour
R11	Highly flammable	H225	Highly flammable liquid and vapour
R12	Extremely flammable	H220	Extremely flammable gas
		H222	Extremely flammable aerosol
R14	Reacts violently with water	None	
R15	Contact with water liberates extremely flammable gases	H260	In contact with water releases flammable gases which may ignite spontaneously
		H261	In contact with water releases flammable gas
R16	Explosive when mixed with oxidising substances	H227	Combustible liquid
R17	Spontaneous flammable in air	H250	Catches fire spontaneously if exposed to air
R18	In use may form flammable/explosive vapour-air mixture	None	
R19	May form explosive peroxides	None	
R20	Harmful by inhalation	H332	Harmful if inhaled
R21	Harmful in contact with skin	H312	Harmful in contact with skin
R22	Harmful if swallowed	H302	Harmful if swallowed
R23	Toxic by inhalation	H331 (if gas)	Toxic if inhaled
R23	Toxic by inhalation	H330 (if vapour)	Fatal if inhaled
R24	Toxic in contact with skin	H311	Toxic in contact with skin
R25	Toxic if swallowed	H301	Toxic if swallowed
R26	Very toxic by inhalation	H330	Fatal if inhaled
R27	Very toxic in contact with skin	H310	Fatal if in contact with skin
R28	Very toxic if swallowed	H301	Fatal if swallowed
R29	Contact with water liberates toxic gas	None	
R30	Can become highly flammable in use	None	
R31	Contact with acids liberates toxic gas	None	
R32	Contact with acids liberates very toxic gas	None	
R33	Danger of cumulative effects	H373	May cause damage to organs through prolonged or repeated exposure
R34	Causes burns	H314	Causes severe skin burns and eye damage
R35	Causes severe burns	H314	Causes severe skin burns and eye damage
R36	Irritating to eyes	H319	Causes serious eye irritation
R37	Irritatint to respiratory system	H335	May cause respiratory irritation

R38	Irritating to skin	H315	Causes skin irritation
R39	Danger of very serious irreversible effects	H370	Causes damage to organs
R40	Limited evidence of a carcinogenic effect	H351	Suspected of causing cancer
R41	Risk of serious damage to eyes	H318	Causes serious eye damage
R42	May cause sensitisation by inhalation	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
R43	May cause sensitisation by skin contact	H317	May cause an allergic skin reaction
R44	Risk of explosion if heated under confinement	H280	Contains gas under pressure; may explode if heated
R45	May cause cancer	H350	May cause cancer
R46	May cause heritable genetic damage	H340	May cause genetic defects
R47	May cause birth defects	H360	May damage fertility or the unborn child
		H361	Suspected of damaging fertility or the unborn child
R48	Danger of serious damage to health by prolonged exposure	H373	May cause damage to organs through prolonged or repeated exposure
R49	May cause cancer by inhalation	None	
R50	Very toxic to aquatic organisms	H400	Very toxic to aquatic life
R51	Toxic to aquatic organisms	H411	Toxic to aquatic life with long lasting effects
R52	Harmful to aquatic organisms	H412	Harmful to aquatic life with long lasting effects
R53	May cause long-term adverse effects in the aquatic environment	H413	May cause long lasting harmful effects to aquatic life
R54	Toxic to flora	None	
R55	Toxic to fauna	None	
R56	Toxic to soil organisms	None	
R57	Toxic to bees	None	
R58	May cause long-term adverse effects in the environment	None	
R59	Dangerous for the ozone layer	H420	Harms public health and the environment by destroying ozone in the upper atmosphere
R60	May impair fertility	H360	May damage fertility or the unborn child
R61	May cause harm to the unborn child	H360	May damage fertility or the unborn child
R62	Possible risk of impaired fertility	H361	Suspected of damaging fertility or the unborn child
R63	Possible risk of harm to the unborn child	H361	Suspected of damaging fertility or the unborn child
R64	May cause harm to breastfed babies	H362	May cause harm to breast-fed children
R65	Harmful may cause lung damage if swallowed	H304	May be fatal if swallowed and enters airways
R66	Repeated exposure may cause skin dryness or cracking	None	
R67	Vapours may cause drowsiness or dizziness	H336	May cause drowsiness or dizziness
R68	Possible risk of irreversible effects	H341	Suspected of causing genetic defects