

# PhD™

## Product Health Declaration



### Dimond Roofing MagnaFlow

MagnaFlow™, a roofing product is made up of a hot dipped aluminium/zinc alloy mixed with magnesium coating over a steel substrate. This enables the zinc to seal the cut edges thus preventing premature corrosion. The substrate is coated to at least 240gms/m2 coating weight and manufactured to AS 1397:2011 standard. The product can be used in atmospheric conditions classified as C1-C4.

**Products/Ranges:** MagnaFlow  
**Product Stages Assessed:** Whole of life  
**CSI Masterformat:** 07 41 13 Metal Roof Panels  
**Licensed Site/s:** Auckland, New Zealand  
**Licence Number:** PCC-002-v1-2019-PhD  
**Licence Date:** 7th August 2019  
**Valid To:** 7th August 2022  
**Standard:** GGT International v4.0  
**Screening Date:** 15th May 2019  
**PhD URL:** [https://www.globalgreentag.com/wp-content/uploads/2019/09/190927\\_PCC\\_MagnaFlow\\_PhD\\_Certificate\\_v1.pdf](https://www.globalgreentag.com/wp-content/uploads/2019/09/190927_PCC_MagnaFlow_PhD_Certificate_v1.pdf)



This PhD ceases currency when original GreenTag GreenRate/LCARate certification expires or is revoked. Please check [www.globalgreentag.com](http://www.globalgreentag.com) for currency. [Note disclaimer over.](#)

<b>PhD Summary</b>	<b>Inventory Threshold:</b>	<b>Inventory Method:</b>
Percentage Assessed: <b>100%</b>	100ppm Product Level	Nested Materials

- GreenTag Banned List Compliant
- Product Meets LEED Material Ingredient Optimisation requirements - No Grey or Red Light category ingredients
- Meets WELL™ Building Standard: Feature 11: Fundamental Material Safety 1c and 5b
- Meets WELL™ Building Standard: Feature X8: Hazardous Material Reduction
- Meets WELL™ Building Standard: Feature 26 Part 1: Precautionary Material Selection, X13 Enhanced Material Precaution 1
- Meets WELL™ Building Standard: Feature 97: Material Transparency, Feature X14: Material Transparency Part 1
- Meets ISCA Rating Tool: MAT-1: Material Lifecycle Impact Measurement and Reduction
- Meets ISCA Rating Tool: MAT-2: Environmentally Labelled Products and Supply Chains
- Very low worker exposure to Carcinogens, Mutagens, Reproductive Toxicant or Endocrine Disruptors
- Very low user exposure to Carcinogens, Mutagens, Reproductive Toxicant or Endocrine Disruptors
- Very low environmental exposure to Carcinogens, Mutagens, Reproductive Toxicant or Endocrine Disruptors

INGREDIENT HAZARD DISCLOSURE, RISK ASSESSMENT, & IN USE HEALTH, % by mass.

ASSESSMENT:

INGREDIENT HAZARD DISCLOSURE	0.1%	98%	1.9%
RISK ASSESSMENT		98%	2%
IN USE HEALTH (INCL VOCS): HEALTHRATE			100%

Declared by:  
Global GreenTag International Pty Ltd



**David Baggs**  
CEO & Program Director  
Verified compliant with:  
ISO 14024 & ISO 17065

## 1.0 Scope

The Global GreenTag International (GGT) Product Health Declaration (PhD) has been designed to provide an additional level of service to the green product sector in facilitating an easier understanding of both the hazard and risk associated with any certified products and is intended to indicate:

- Chemical hazards of both finished product and unique ingredients to a minimum level of 100ppm for each homogeneous ingredient throughout the product life cycle, (including any VOC or other gaseous emissions);
- An assessment of exposure or risk associated with ingredient handling, product use, and disposal in relation to established mitigation and management processes;

It is not intended to assess:

- substances used or created during the manufacturing process unless they remain in the final product; or
- substances created after the product is delivered for end use (e.g., if the product unusually degrades, combusts or otherwise changes chemical composition).

GGT PhDs are only issued to products that have passed GGT Standards' certification requirements. The Level of Assessment (BronzeHEALTH, SilverHEALTH, GoldHEALTH or PlatinumHEALTH) rating relates ONLY to GGT Standard Sustainability Assessment Criteria 3, and is declared separately to the overall Bronze, Silver, Gold or Platinum Green Tag Certification Mark Tier Levels.

## 1.2 Preparing an PHD

GGT PhDs are prepared using Hazard Classifications from the UN Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and as an outcome of a successful Application for Certification. Assessments are undertaken by GGT Qualified Exemplar Global Lead Auditors and subsequently accepted for Certification by the GGT Program Director (also a Qualified Exemplar Global Lead Auditor) under the GGT International Standard v4.0, Personal Products Standard v1.0, and Cleaning Products Standard v1.0 and above Program Rules.

## 1.3 External Peer Review

Every GGT PhD is independently peer reviewed by an external Consultant Toxicologist and Member of the Australian College of Toxicology & Risk Assessment.

## 2.0 Declaration of Ingredients

Where a manufacturer wishes recognition under a rating program that requires transparency of ingredients such as LEED v4.0, Living Building Challenge, Estidama etc., the following information is declared from audit:

Colour	Ingredient Name
Green	<b>Ideal- Low</b> No Comment required
Yellow	<b>Medium to Low</b> No Comment, or 'Issue of Concern' required depending on % of ingredient.
Orange	<b>Moderate</b> 'Issue of Concern' or 'Red Light' Comment depending on % of ingredient. Limit 10%
Red	<b>Problematic (Red): Target for Phase</b> 'Issue of Concern' or 'Red Light' Comment depending on % of ingredient. Strict Upper Limit of 1%
Grey	<b>Uncategorised</b> Not able to be categorised due to lack of toxicity impact information.
Black	<b>Banned Ingredients</b> POPs, SVHCs plus a wide range of compounds depending on specific Standard requirements

Global GreenTag International Pty Ltd (Global GreenTag) is not a medical professional organisation. Global GreenTag does not purport to provide medical advice, and makes no warranty, representation, or guarantee regarding the declaration that it provides in relation to any allergies, chemical sensitivities or any other medical condition, nor does Global GreenTag assume any liability whatsoever arising out of the application or use of any product or piece of equipment that has been chemically assessed by Global GreenTag.

The chemical assessments carried out provide transparent information peer reviewed by a consultant toxicologist regarding the chemical make-up and ingredients of certain materials and products, but such assessments are not to be taken as any form of medical assessment or health advice and are not targeted towards providing specific solutions to allergenic conditions or any other type of medical concerns.

Users must carry out their own investigations if they are concerned about specific medical conditions and the impact of certain products or ingredients in relation to specific medical concerns.

Global GreenTag takes no responsibility and is not liable in any way with respect to any medical or health issues arising from a person's use of materials or products that have been chemically assessed by Global GreenTag. Global GreenTag shall not be liable for any direct, indirect, punitive, incidental, special or consequential damages to property or life whatsoever, arising out of or connected with the use or misuse of any materials or products that have been assessed by Global GreenTag.

Ingredient Name	CAS Number OR Function	Proportion in finished product	GHS, IARC & Endocrine Category	Ingredient Assessment (Raw)	Whole Of Life Assessment	In Use Health Assessment	Comment
<b>Pretreatment coating</b>							
Roll-on pretreatment coating	Coating	0.01-0.1%	Acute Tox. 4 Skin Sens. 1. STOT SE 2. Carc. 1A. Repr. 1A. Skin Corr. 1B. Eye Dam. 1.				The roofing is cured before being used leading to no hazards during the in use phase.  Recycled Content: Unknown Nanomaterials: no
Orthophosphoric acid	Metal cleaning	<0.1	Skin Corr. 1B Acute Tox 4. Eye Dam 1.				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no

Dichromium tris	Corrosion inhibitor	<0.1	Acute Tox. 3. Skin Corr. 1. Skin Sens. 1. Eye Dam. 1. Acute Tox. 4				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Chromium Orthor-phosphate	Corrosion protection	<0.1	Skin Irrit. 2 Eye Irrit. 2 Acute Tox. 4				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Proprietary	Proprietary	<0.1	None				None
<b>Polyester Primer</b>							
Yellow Primer	Primer	0.1-1%	None				The roofing is cured before being used leading to no hazards from this ingredient in this primer during the in use phase.  Recycled Content: Unknown Nanomaterials: no
Naptha	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
1,2,4-trimethylbenzene	Additive	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
butan-1-ol	Paint thinner	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Strontium chromate	Corrosion inhibitor	0.01-0.5%	Acute Tox. 4. Carc. 1B Aq Acute 1				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
4-hydroxy-4-methyl-pentan-2-one	Solvent	0.01-0.5%	Eye Irrit. 2. Flam. Liq. 3 STOT SE 3				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
4-methylpen-tan-2-one	Solvent	0.01-0.5%	Flam. Liq. 2. Eye Irrit. 2 Acute Tox. 4 STOT SE 3				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no

2-butoxyethanol	Solvent	0.01-0.5%	Acute Tox. 4 Skin Irrit. 2. Eye Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Xylene	Solvent	<0.1	Flam. Liq. 3 Acute Tox. 4 Skin Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Proprietary	Proprietary	0.1-1%	None				None
<b>Topcoat</b>							
Polyester Topcoat	Coating	0.1-1%	None				The roofing is cured before being used and this leads to no hazards related to this topcoat during the in use phase.  Recycled Content: Unknown Nanomaterials: no
Naptha (Heavy aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				In the in-use phase, Naptha as a solvent poses no risk as it is constituent of the coating which has been cured.  Recycled Content: Unknown Nanomaterials: no
Naptha (Light aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				In the in-use phase, Naptha as a solvent poses no risk as it is constituent of the coating which has been cured.  Recycled Content: Unknown Nanomaterials: no
butan-1-ol	Paint thinner	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
4-hydroxy-4-methylpentan-2-one	Solvent	0.01-0.5%	Eye Irrit. 2. Flam. Liq. 3 STOT SE 3				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
1-methoxy-2-propanol	Solvent	0.01-0.5%	Flam. Liq. 3. STOT SE 3.				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
1,2,4-trimethylbenzene	Additive	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Xylene	Solvent	<0.1	Flam. Liq. 3 Acute Tox. 4 Skin Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no

Proprietary	Proprietary	0.1-1%	None				None
<b>Topcoat</b>							
Naptha (Light aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				In the in-use phase, Naptha as a solvent poses no risk as it is constituent of the coating which has been cured.  Recycled Content: Unknown Nanomaterials: no
2-butoxyethanol	Solvent	0.01-0.5%	Acute Tox. 4 Skin Irrit. 2. Eye Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Naptha (Heavy aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				In the in-use phase, Naptha as a solvent poses no risk as it is constituent of the coating which has been cured.  Recycled Content: Unknown Nanomaterials: no
1,2,4-trimethylbenzene	Additive	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Silicone dioxide	Corrosion inhibitor	0.01-0.5%	Skin Irrit. 2. Eye Irrit. 2. STOT SE 3. Acute Tox. 4. STOT RE 2.				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Xylene	Solvent	0.01-0.5%	Flam. Liq. 3 Acute Tox. 4 Skin Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Napthalene	Solvent	0.01-0.5%	Acute Tox. 4. Aquatic Acute 1				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Ethylbenzene	Solvent	0.01-0.5%	Flam. Liq. 2. Acute Tox. 4 Asp. Tox. 1. STOT RE 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
<b>Topcoat</b>							
Waterborne topcoat	coating	0.01-0.5%	None				The roofing is cured leading to no hazards related to this ingredient in the topcoat during the in use phase.  Recycled Content: Unknown Nanomaterials: no

2,2' -oxybisethanol	Solvent	0.01-0.5%	Acute Tox. 4. STOT RE 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
2-dimethylaminoethanol	Solvent	0.01-0.5%	Flam. Liq. 3. Acute Tox. 4 Skin Corr. 1B				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
2,4,7,9-tetramethyldec-5-yne-4,7-diol	Surfactant	0.01-0.5%	Skin Sens. 1B. Eye Dam. 1. Aq Chronic 3. Aq Acute 1				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Proprietary	Proprietary	0.01-0.5%	None				None
<b>Back coating</b>							
Grey backer	Coating	0.01-0.5%	None				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Naptha (Light aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
4-hydroxy-4-methylpentan-2-one	Solvent	0.01-0.5%	Eye Irrit. 2. Flam. Liq. 3 STOT SE 3				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
1,2,4-trimethylbenzene	Additive	0.01-0.5%	Flam. Liq. 3. Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. STOT SE 3. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Naptha (Heavy aromatic)	Solvent	0.01-0.5%	Asp. Tox. 1. Muta. 1B. Carc. 1B. Flam. Liq. 2. Skin Irrit. 2. Repr. 2. Aq Chronic 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Silicone dioxide	Corrosion inhibitor	0.01-0.5%	Skin Irrit. 2. Eye Irrit. 2 STOT SE 3. Acute Tox. 4. STOT RE 2.				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
2-butoxyethanol	Solvent	0.01-0.5%	Acute Tox. 4 Skin Irrit. 2. Eye Irrit. 2				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no

Xylene	Solvent	0.01-0.5%	Flam. Liq. 3 Acute Tox. 4 Skin Irrit. 2				The roofing is cured before being used leading to no hazards related to this ingredient in the grey backing coat during the in use phase.  Recycled Content: Unknown Nanomaterials: no
Napthalene	Solvent	0.01-0.5%	Acute Tox. 4. Aquatic Acute 1				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
Carbon black	Pigment	0.01-0.5%	None				The coating is fully cured before use. No hazards from this ingredient exist in the use phase.  Recycled Content: Unknown Nanomaterials: no
<b>Protective film</b>							
Plastic film	Protective film	0.1-0.9%	None				Each metal panel is covered with plastic film to protect the surface finish to the stage of the installation. During use, this protective film is non-existent and is thus does not pose any risks at all to users  Recycled Content: Unknown Nanomaterials: no
<b>Protective film</b>							
Surface film	Protective film	0.1-0.9%	None				Each metal panel is covered with surface film to protect the surface finish to the stage of the installation. During use, this protective film is non-existent and is thus does not pose any risks at all to users  Recycled Content: Unknown Nanomaterials: no
<b>Metallic coated steel</b>							
Steel alloy	Substrate	90-99%	Acute Aq. Tox 1. STOT RE. 2. STOT SE. 1. Repr. Tox 1B				None  Recycled Content: Unknown Nanomaterials: no
<b>Zinc Aluminium Magnesium Coated Steel</b>							
Aluminium Zinc Magnesium alloy	Substrate	90-99%	None				None  Recycled Content: Unknown Nanomaterials: no

**Comments:**

VOC emissions: (indicate program and building scenario applied eg: SCS Indoor Advantage Gold - Residential) or if "inherently non-emitting source" (See LEED criteria for this)

VOC content: VOC g/l for wet/liquid product applied on site (include method eg SCAQMD 1168) or "Not applicable" if not wet/liquid product applied on site.

Explanation of variations among products if different products listed in a single Phd

Other relevant information as necessary.