

Tiger Profiles & Insulation LLC – Solacoat Cool-it Ceram Topcoats and Solacoat White & Pastel Gloss Acrylic Topcoats

Overview

A range of energy efficient coatings that reduce solar radiation heat penetration, lowering internal temperatures, thus reducing the need for mechanical cooling. Suitable for use on a range of materials, including exterior metal, tile and masonry surfaces in residential and commercial projects.



Product Description

Tiger Profiles range includes *Solacoat Cool-it Ceram Topcoats* and *Solacoat White & Pastel Gloss Acrylic Topcoats*.

Solacoat Cool-it Ceram Topcoats are a range of highly durable, selected topcoats in a range of colours for use on roofs (metal or tiled). The technology used permits significantly lower heat absorption to under-roof space, reducing internal temperatures up to 8-12°C, depending on the colour selected. This reduced heat influx through the roof cavity results in reduced demand on air-conditioning systems devices and consequent cost and greenhouse gas emissions savings through reduced electricity consumption.

Solacoat White & Pastel Gloss Acrylic Topcoats is a high opacity acrylic paint finish designed for moderating temperature extremes on exterior surfaces (brick, masonry, plaster, galvanised steel, zincalume or aluminium). Its tough, flexible finish gives long lasting protection against weathering and resistance against mould and fungal growth. The paint has several characteristics, including strong adhesion, flow and quick drying, allowing same day recoat. *Solacoat White & Pastel Gloss Acrylic Topcoats* can be used on normal interior and exterior surfaces.

PRODUCT SPECIFICATIONS

Options	Available in 4 litre, 15 litre & 20 litre drums, or 200 litres for commercial applications.
Colours	<ul style="list-style-type: none"> <i>Solacoat Cool-it Ceram Topcoats</i> - Aged Pottery, Blue Mountain, Brown, Grey, Mocha, Natural Green, Natural Red, Rivergum, Smooth Cream, Sunset Red, Terracotta, White, Charcoal. <i>Solacoat White & Pastel Gloss Acrylic Topcoats</i> – Topcoat White & Pastel Colours
Warranty	10 year warranty covering solar reflectivity, colour uniformity, cracking, peeling or flaking.



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Expected Life	<ul style="list-style-type: none"> • Coating life – expected 15 years • Fade resistant for up to 20 years.
Indicative Costs	Contact supplier
Purchase Options	-
Constituents	Water based acrylic top coats (constituents proprietary – sighted by ecospecifier for assessment)
National & International Standards	<ul style="list-style-type: none"> • Australian Paint Approval Scheme (APAS) accredited • Manufactured in NATA approved laboratory
Technical Specifications	<ul style="list-style-type: none"> • Covers approximately 10-12 square meters per litre per coat depending on the surface porosity. • Approximate drying times at 25° C and 50% relative humidity • Touch Dry: 30-45 minutes • Recoat: minimum 4 hours <i>Solacoat Cool-it Ceram Topcoats</i>. <i>Solacoat White & Pastel Colours</i> recoat 2 hours • Full gloss approximately 60-75% depending on colour
Country of Origin	Australia
Availability	<p><i>Asia</i></p> <ul style="list-style-type: none"> • Malaysia, Philippines, Thailand, China, Japan, India, Pakistan, Singapore <p><i>Middle East</i></p> <ul style="list-style-type: none"> • UAE, Afghanistan, Iran and Saudi Arabia, Egypt <p><i>Africa</i></p> <ul style="list-style-type: none"> • South Africa
Projects	<ul style="list-style-type: none"> • Coca Cola warehouses in Alice Springs and Tennant Creek



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	<ul style="list-style-type: none"> • NSW Railways: tracks, sheds and tools throughout NSW • Queensland Rail-Workshops • Supercheap Auto DC Centre in Queensland • Pioneer Hi-Bred: Silos for grain/cereal storage in Toowoomba and Narromine • IGA Foodland: Retail premises in Adelaide • Metcash Grocery Warehouse-DC: Alice Springs • Snooze retailers in Canberra • Country Water offices and sheds in Broken Hill • Lord Byron resort in Byron Bay • Gold Coast City Council External electronic boxes on the Gold Coast • Snopec Oil China: Gas Storage and Fuel Tanks • Shell-Philippines: Floating Fuel Tanks • Many domestic and smaller commercial roofs including Terracotta, Steel, Concrete, Fibrous cement
Preparation	Brushing, rolling, spraying grade of gloss architectural water based acrylic coloured coating range for the painting of roofs.

ECOSPECIFIER LIFE-CYCLE ASSESSMENT

INTEGRATED DESIGN AND POLICY ISSUES

Reducing heating and cooling loads of buildings contributes to reductions in energy consumption and associated greenhouse gas emissions, through reduced need for air conditioning, and hence reduced plant size and operating costs. Improved thermal performance will also support staff comfort and increase productivity.

When applied to concrete roof or other high mass building surfaces, will reduce urban heat island effects due to high reflectivity. Urban heat island mitigation will increase local evening comfort, reduce cooling system loads and rescue local environmental heat stress on ecosystems.

HUMAN HEALTH

Health

See *Ecospecifier Issues of Concern* section below.



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Comfort

Coatings will improve internal comfort levels, lengthens the life of stored products and reduces or totally negates the need for power to cool and subsequently reduces greenhouse gas emissions.

Indoor Environment Quality

Not applicable

Electromagnetic Radiation

The need for less cooling devices such as air conditioning can reduce the amount of radiation bouncing off buildings.

Safety

Not applicable.

Accessibility

Not applicable.

ECOLOGICAL QUALITY

Terrestrial

Emissions – Coating contains ammonia in liquid form. In gaseous form, ammonia deposits can potentially react with acidic compounds in the atmosphere and contributing to acid rain affecting nitrogen content in nutrient poor soils.

Application tools should be cleaned in a contained treatment system to avoid contamination of topsoil. This product must be disposed of in accordance to local regulations.

Physical – In the liquid form, product should not be released into waterways, waste water or soil as it is not readily biodegradable and has the potential to have long retention times in water.

Aquatic

Emissions – Coatings contains a small volume of substances that are very toxic to marine environments and may cause long term adverse effects in the aquatic environment in liquid form. See *Ecospecifier Issues of Concern*.

Physical – In the liquid form, product should not be released into waterways, waste water or soil as it is not readily biodegradable and has the potential to have long retention times in water. Based on data for similar components or preparations, this product is expected to be toxic to aquatic organisms. Long term adverse effects to aquatic organisms are possible if continuous exposure is maintained.

Atmosphere

The coatings have low volatile organic compound (VOC) content, minimising VOC emissions. Content for each coating is:



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- *Solacoat Cool-it Ceram Topcoats* – 53g / Litre
- *Solacoat White & Pastel Gloss Acrylic Topcoats* – 38g / Litre

Greenhouse (GHG) – Coating has comparable embodied energy and GHG intensity to other water based concrete coatings, which are low in comparison to solvent based coatings.

Greenhouse intensity –

- *Solacoat Cool-it Ceram Topcoats* Metal Roofs (Unpainted & Previously Painted) and Tiled Roofs (Concrete or Terracotta) approximately 0.4gCO_{2e} / m^{2*}

* based on 2 coats of painting with average coverage of ~ 0.1kg / m² per coat

- *Solacoat White & Pastel Gloss Acrylic Topcoats* Brick, Masonry, Plaster Etc. (unpainted & previously painted), Timber (unpainted & previously painted) and Galvanised Steel, Zinalume & Aluminium (unpainted) – approximately 0.2gCO_{2e} / m^{2*}

* based on 2 coats of painting with average coverage of ~ 0.082kg / m² per coat

Transport intensity – Product is manufactured in Brisbane, Australia. Energy and GHG figures for shipping product are shown below.

Product weight	Energy Intensity - Container Shipping	GHG Intensity - Container Shipping
<ul style="list-style-type: none"> • <i>Solacoat Cool-it Ceram Topcoats</i> Metal Roofs (Unpainted & Previously Painted) and Tiled Roofs (Concrete or Terracotta) - ~ 0.1kg / m².coating • <i>Solacoat White & Pastel Gloss Acrylic Topcoats</i> Brick, Masonry, Plaster Etc. (unpainted & previously painted), Timber (unpainted & previously painted) and Galvanised Steel, Zinalume & Aluminium (unpainted) - ~ 0.082kg / m².coating 	0.000135MJ / kg.km	0.000011kgCO _{2e} / kg.km

Table below provides land transportation greenhouse intensity figures to help calculate the greenhouse gas intensity of land transportation from shipping port.

Light commercial vehicle	Rigid Truck	Articulated Truck
0.001451kgCO _{2e} / kg.km	0.000195kgCO _{2e} / kg.km	0.000169kgCO _{2e} / kg.km

Transport intensity figures sourced from Australian National Greenhouse Gas Inventory 1990, 1995 and 1999 and WWF International, Inland Navigations and Emissions, 2005.



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Operational efficiency – Product is greenhouse efficient in its operation in that it lowers internal temperatures, which reduces the need for mechanical cooling.

Re-use Efficiency – Not applicable.

Toxics and Pollutants – Coating emits limited volatile organic compounds (VOCs) into the air. VOCs can combine with other air pollutants to form photochemical smog.

Ozone Depletion – Coating does not contain any ozone depleting (ODP) substances. Coating may minimise the use of ODPs through reducing loads placed on mechanical air conditioning systems, which often use ODP refrigerants.

Urban Heat Island Effects – Product reduces heat in building walls and roofs to pavements and light traffic areas.

Noise – Not applicable.

Biodiversity

The extraction of petroleum for synthetic polymer based constituents in the coating will disrupt local landscapes and alter local ecosystems. In the event of an oil-spill, while rare, significant localised biodiversity impacts can result.

The process of extracting mineral based additives in coating, particularly titanium dioxide (pigment), silica and sand, are sourced as a result of sand mining, a high biodiversity impact process. Mining modifies soil profiles, topography and drainage patterns which impacts natural vegetation and biodiversity.

Reduced heat island effects will provide minor positive contribution to ecosystem health.

RESOURCE DEPLETION

Resource Efficiency

Synthetic polymer based constituents are derived from diminishing and non-renewable reserves of petroleum.

Embodied Fossil Fuel Energy

- *Solacoat Cool-it Ceram Topcoats* Metal Roofs (Unpainted & Previously Painted) and Tiled Roofs (Concrete or Terracotta) – approximately 14.4MJ / m^{2*} ^

*based on 2 coats of painting with average coverage of ~ 0.1kg / m² per coat.

^*Coolshield International* recommends that two coats of *Solacoat Cool-it Ceram Topcoats* are applied after one coat of *Solacoat WB Metal Primer* for Metal Roofs (Unpainted & Previously Painted) and one coat of *Solacoat CP Primer* for Tiled Roofs (Concrete or Terracotta). Refer to relevant listings for individual embodied energy calculations.

- *Solacoat White & Pastel Gloss Acrylic Topcoats* Brick, Masonry, Plaster Etc. (unpainted & previously painted), Timber (unpainted & previously painted) and Galvanised Steel, Zincalume & Aluminium (unpainted) – approximately 7.4MJ / m^{2*} ^

*based on 2 coats of painting with average coverage of ~ 0.082kg / m² per coat



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^Coolshield International recommends that two coats of *Solacoat White & Pastel Gloss Acrylic Topcoats* are applied after one coat of *Solacoat CP Primer* for Brick, Masonry, Plaster Etc. (unpainted & previously painted), Timber (unpainted & previously painted) and one coat of *Solacoat WB Metal Primer* for Galvanised Steel, Zincalume & Aluminium (unpainted).

Embodied Water

Information not available

Durability

Coating provides a durable and protective coating for a surface substrate and has a 10 year performance warranty.

Reusability

Not applicable.

Repairability

Refer to *Preparation*.

Design for Dematerialisation

Coating can assist in minimising urban heat island levels and heat transfer into buildings reducing energy loads placed on HVAC systems. This may also lead to reduced plant size, reduced operational times, and in some cases, reduction or elimination of mechanical air conditioning systems.

Design for Disassembly

Not applicable

Recyclability

No.

Maintenance

Better performance and durability can be ensured provided the surface is cleaned regularly.

Product Takeback Scheme

Not applicable

Extended Producer Responsibility (EPR)

No

CORPORATE AND SOCIAL SUSTAINABILITY

Audits and Environmental Reporting

No



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Convictions

No

Environmental Policy

No

Social Enhancement Programs

No

Technology Transfer Programs

No

Environmental Management Systems (EMS)

Yes

ECOSPECIFIER ISSUES OF CONCERN / RED LIGHTS

- *Solacoat Cool-it Ceram Topcoats*

Coatings contain a small percentage of titanium dioxide (between 0.54-0.22%) and some coating colours (grey, rivergum, smooth cream and white) contain a larger percentage of titanium dioxide (between 1.2-6.64%). In 2006, the IARC reclassified titanium dioxide as possibly carcinogenic to humans (Group 2B). This issue relates to the inhalation of pure powdered and ultra-fine titanium dioxide dust during manufacture and is not considered a risk, as the TiO₂ is not in a respirable form when bound into the product.

Accordingly the sanding, grinding and other occupational production activities of products containing titanium dioxide may present issues if appropriate precautions are not taken. Precautions for workers such as reducing exposure to product in dust form and using appropriate Personal Protective Equipment (PPE) mitigate potential issues to *low* risk in accordance with an **ecospecifier** Risk Assessment. Refer to Material Safety Data Sheet for further information.

ECOSPECIFIER GREENRATE GREEN BUILDING SCHEME PRE-ASSESSMENT

LEED® for Commercial Interiors - Version 2.0 (see LEED® disclaimer below)

INDOOR ENVIRONMENTAL QUALITY

<p><u>EQ Credit 4.2: Low -Emitting Materials, Paints and Coatings</u> ¹</p> <p>Product is likely to assist in a project obtaining this credit as it meets the prescribed standard/s for interior paint/s and/or coating/s applied on-site.</p>	<p><i>Points Available</i></p> <p>1</p>
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LEED® for New Construction & Major Renovations - Version 2.2 (see LEED® disclaimer below)

SUSTAINABLE SITES

<p><u>SSCredit 7.1: Heat Island Effect: Non-Roof</u></p> <p>Product is likely to assist in a project obtaining this credit as it reduces heat island effects. Credit point is achieved when the requirements for one of the two following options are met;</p> <ul style="list-style-type: none"> • <i>Option 1</i> includes providing a combination of shade (within 5 years of occupancy), paving materials with a Solar Reflectance Index (SRI) of at least 29 and an open grid pavement system for 50% of the site hardscape (including roads, sidewalks, courtyards and parking lots). • <i>Option 2</i> includes placing a minimum of 50% of parking spaces under cover (any roof used to shade or cover parking must have a SRI of at least 29). <p><u>Exemplary Performance: Innovation in Design & Process: Heat Island Effect: Non-Roof (additional 1 point)</u></p> <p>Possible achievement when either of the following options are met;</p> <ul style="list-style-type: none"> • <i>Option 1</i> includes demonstrating that 100% of non-roof impervious surfaces have been constructed with high-albedo materials and/or open grid paving and/or will shade within 5 years • <i>Option 2</i> includes demonstrating of the on-site parking spaces have been located under cover. 	<p><i>Points Available</i></p> <p>1</p> <p>1</p>
<p><u>SSCredit 7.2: Heat Island Effect: Roof</u></p> <p>Product is likely to assist in a project obtaining this credit as it reduces heat island effects. Credit point is achieved when the prescribed requirements for one of the three following options are met; Option 1 includes using roofing materials with a high Solar Reflective Index (SRI), Option 2 includes installing a vegetated roof, and Option 3 includes installing high albedo and vegetated roof surfaces.</p> <p><u>Exemplary Performance: Innovation in Design & Process: Heat Island Effect: Roof (additional 1 point)</u></p> <p>Possible achievement when 100% of the projects roof area (excluding mechanical equipment, photovoltaic panels, and skylights) is comprised of a green roof.</p>	<p><i>Points Available</i></p> <p>1</p> <p>1</p>



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ENERGY & ATMOSPHERE

<p><u>EA Prerequisite 2: Minimum Energy Performance</u> ¹</p> <p>Product may assist a project meet the Rating System Energy Prerequisite, when appropriately included in combination with other elements and assessed using a computer simulation model, to comply with the nominated standard or the local energy code (whichever is more stringent).</p>	<p><i>Points Available</i></p> <p>Required</p>
<p><u>EA Credit 1: Optimise Energy Performance</u> ¹</p> <p>Product may assist in a project obtaining credits, when appropriately designed in combination with other elements and assessed using a computer simulation model, for increasing the level of energy performance above the nominated baseline prerequisite standard.</p> <p><u>Exemplary Performance: Innovation in Design & Process: Optimise Energy Performance</u> (<i>additional 1 point</i>)</p> <p>Possible achievement when minimum energy cost savings of 45.5% for New Buildings and 38.5% for Existing Buildings are obtained when using EA Credit 1 Option 1. An Innovation in Design & Process credit point is not available for Option 2, 3 or 4.</p>	<p><i>Points Available</i></p> <p>10*</p> <p>* 2 points mandatory performance level</p> <p>1</p>

INDOOR ENVIRONMENTAL QUALITY

<p><u>EQ Credit 4.2: Low-Emitting Materials: Paints and Coatings</u> ²</p> <p>Product is likely to assist in a project obtaining this credit as it meets the prescribed standard/s for interior paint/s and/or coating/s applied on-site.</p>	<p><i>Points Available</i></p> <p>1</p>
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Green Star™ Office Interiors Version 1.1 Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

<p><u>IEQ-11: Volatile Organic Compounds: Paints</u>²</p> <p>Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content</p>	<p><i>Points Available</i></p> <p>2</p>
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standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.

Green Star™ Office Design Version 2 Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

IEQ-13: Volatile Organic Compounds: Paints²

Points Available

Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.

1

ENERGY

Ene-1: Energy¹

Points Available

Product is likely to assist in a project obtaining the conditional requirement for the design of a base building that achieves a predicted rating of 4 stars or greater using the Australian Building Greenhouse Rating (ABGR) scheme's *Validation Protocol for Tenancy Energy Estimation Version 2005-02*.

Conditional

Ene-2: Energy Improvement¹

Points Available

Product is likely to assist in obtaining credits for improvement in the overall energy efficiency of a project. Credit points achieved are determined by the star rating achieved above the conditional 4 star Australian Building Greenhouse Rating (ABGR). Product contribution to credit points is determined by project energy load simulation and needs to be included in the model to provide beneficial credits.

15

Green Star™ Office Design Version 3 Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

IEQ-13: Volatile Organic Compounds: Paints²

Points Available

Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard

1



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ENERGY

Ene: Conditional Requirement¹

Product is likely to assist in a project obtaining the conditional requirement for the design of a base building in which the project's greenhouse gas emissions do not exceed 110 kgCO₂ / m² / annum as determined using the Australian Building Greenhouse Rating (ABGR) *Validation Protocol for Computer Simulations* or by using the final and current version of the Green Star™ Energy Calculator.

Points Available

Conditional

Ene-1: Greenhouse Gas Emissions¹

Product is likely to assist in obtaining credits for minimising the greenhouse gas emissions of a project. Credit points achieved are determined by determining the reduction in predicted greenhouse gas emissions below the Conditional Requirement of 110 kgCO₂/m²/annum. Full points are available for carbon-neutral base buildings.

Points Available

20

Green Star™ Retail version 1 2008 Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

IEQ-8: Volatile Organic Compounds: Paint²

Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.

Points Available

1

ENERGY

Ene-1: Greenhouse Gas Emissions¹

Product is likely to assist obtaining credits for improvement in the operational energy consumption of a project. Credit points achieved are determined by the predicted percentage of greenhouse gas emissions reduction below the "standard practice benchmark". This benchmark is determined by the *Retail Centre V1* Energy Calculator.

Points Available

20

Green Star™ Education version1 2008 Compatibility (see Green Star™ disclaimer below)



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INDOOR ENVIRONMENT QUALITY

<p><u>IEQ-8: Volatile Organic Compounds: Paint</u>²</p> <p>Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.</p>	<p><i>Points Available</i></p> <p>1</p>
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ENERGY

<p><u>Ene: Conditional Requirement</u>¹</p> <p>Product is likely to assist in a project obtaining the conditional requirement by meeting the green house gas emissions '<i>benchmark</i>' determined by the energy calculator.</p>	<p>Conditional</p>
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<p><u>Ene-1: Greenhouse Gas Emissions</u>¹</p> <p>Product is likely to assist obtaining in a project obtaining credits for designs that minimise greenhouse gas emissions associated with operational energy consumption. Credit points achieved are determined by the predicted % reduction of greenhouse gas emissions below the conditional requirement.</p>	<p><i>Points Available</i></p> <p>20</p>
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Green Star™ Industrial Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

<p><u>IEQ-8: Volatile Organic Compounds: Paint</u>²</p> <p>Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.</p>	<p><i>Points Available</i></p> <p>1</p>
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ENERGY

<p><u>Ene Conditional Requirement</u>¹</p> <p>Product is likely to assist in a project obtaining the conditional requirement by meeting the green house gas emissions bench mark, determined by the Green Star Industrial Pilot Energy Calculator.</p>	<p>conditional</p>
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<p><u>Ene-1: Greenhouse Gas Emissions</u>¹</p> <p>Product is likely to assist obtaining credits for improvement in the operational energy efficiency of a project. Credit points achieved are by the further reduction below the conditional requirement determined by the Energy Calculator.</p>	<p><i>Points Available</i></p> <p>20</p>
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Green Star™ Multi Unit Residential version1 2009 Compatibility (see Green Star™ disclaimer below)



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INDOOR ENVIRONMENT QUALITY

<p><u>IEQ-8: Volatile Organic Compounds: Paint²</u></p> <p>Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.</p>	<p><i>Points Available</i></p> <p>1</p>
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ENERGY

<p><u>Ene: Conditional Requirement¹</u></p> <p>Product is likely to assist in a project obtaining the conditional requirement for energy consumption and minimisation of greenhouse gases, through improved thermal performance. Average thermal performance for dwellings must be improved by 10% compared to the thermal performance standard in the relevant jurisdiction.</p>	<p><i>Conditional</i></p>
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<p><u>Ene-1: Greenhouse Gas Emissions¹</u></p> <p>Product is likely to assist obtaining credits for improvement in the operational energy efficiency of a project. Credit points achieved are determined by the predicted percentage of greenhouse gas emissions reduction below the “<i>standard practice benchmark</i>”. This benchmark is determined by the <i>Multi Unit Residential Centre V1 Energy Calculator</i>.</p>	<p><i>Points Available</i></p> <p>20</p>
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Green Star™ Healthcare version1 2009 Compatibility (see Green Star™ disclaimer below)

INDOOR ENVIRONMENT QUALITY

<p><u>IEQ-8: Volatile Organic Compounds: Paint²</u></p> <p>Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.</p>	<p><i>Points Available</i></p> <p>1</p>
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ENERGY

<p><u>Ene-Con: Energy Conditional Requirement¹</u></p> <p>Product is likely to assist in a project meeting the energy conditional requirement. The project’s predicted greenhouse gas emissions must be equal to or an improvement, in the ‘<i>bench mark</i>’ building determined using <i>Healthcare v1 Greenhouse Gas Emissions Calculator</i>.</p>	<p>Conditional</p>
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Ene-1: Greenhouse Gas Emissions¹

Points Available

Product is likely to assist in a project obtaining credits for reduction in operational energy consumption and greenhouse gas emissions of the base building. One point is achieved for every 5% reduction against the 'bench mark' building and zero net operating buildings receive 20 credit points.

20

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Green Star SA™ Office Version 1 Compatibility (see disclaimer below)

INDOOR ENVIRONMENT QUALITY

IEQ-13: Volatile Organic Compounds: Paints²

Points Available

Product is likely to assist in a project obtaining a credit point as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve the credit point 95% of all painted surfaces in the project must be in accordance with the prescribed standard.

1

ENERGY

Ene: Conditional Requirement¹

Product is likely to assist in a project obtaining the conditional requirement by improving energy performance equal to or better than a notional building constructed to the 'deemed to comply' fabric and building services clauses of SANS 204:2008 *Energy Efficiency in Buildings* demonstrated by using the Green Star SA energy calculator or fully comply with ASHRAE *Advanced Energy Design Guide for Small Office Buildings*.

Conditional

Ene-1: Greenhouse Gas Emissions¹

Points Available

Product is likely to assist in obtaining credits for minimising the greenhouse gas emissions of a project. Credit points achieved are determined by demonstrating the reduction in predicted greenhouse gas emissions below the Conditional Requirement. Full points are available for carbon-neutral base buildings.

20

or

4

Alternatively this product may assist in a project obtaining 4 points for offices smaller than 2,000m² UA by assisting in demonstration of compliance with ASHRAE *Advanced Energy Design Guide for Small Office Buildings*.

Green Star SA™ Retail Pilot Compatibility (see disclaimer below)

INDOOR ENVIRONMENT QUALITY



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<u>IEQ-8: Volatile Organic Compounds: Paint²</u>	<i>Points Available</i>
Product is likely to assist in a project obtaining credits as it meets the prescribed Volatile Organic Compound (VOC) content standard for paints. To achieve credit points 95% of all painted surfaces in the project must be in accordance with the prescribed standard.	1

ENERGY

<u>Ene: Conditional Requirement¹</u>	Conditional
Product is likely to assist in a project obtaining credits by reducing operational energy consumption and maximising operational energy efficiency so that the predicted carbon emissions of the building are less than or equal to the predicted carbon emissions of the notational building in the same location established by the requirements of the <i>Retail Centre PILOT</i> Energy Calculator and the Modelling Protocol Guide.	

<u>Ene-1: Greenhouse Gas Emissions¹</u>	<i>Points Available</i>
Product is likely to assist in a project obtaining credits for improvement in the operational energy consumption of a project. Credit points achieved are determined by the predicted percentage of greenhouse gas emissions reduction below the “standard practice benchmark”. This benchmark is determined by the <i>Retail Centre PILOT</i> Energy Calculator.	20

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The ESTIDAMA Pearls New Buildings Rating Method Vol- 4

RESOURCEFUL ENERGY

<u>RE-r1: Energy Conservation: Minimum¹</u>	<i>Points Available</i>
Product may assist in a project obtaining this requirement if the building meets the prescribed energy performance requirements, such as the required Prescriptive or Performance Requirements.	Requirement

<u>RE-1: Energy Conservation Improvement: Carbon Reduction¹</u>	<i>Points Available</i>
Product may assist in a project obtaining this credit for Energy Conservation Improvement to reduce energy consumption and carbon emissions during building operation compared to either Budget Building or Benchmark building including renewable energy inputs or offsets.	20
Up to 3 credit points may be achieved by products/materials in combination for passive environmental design.	

LIVEABLE BUILDINGS



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<p><u>LB-1 Community Walkability</u></p> <p>Product may assist in a project obtaining this credit where the ground floor level of the building is integrated into the surrounding urban fabric and supports a pedestrian-oriented urban environment by achieving measures determined in EPDS.</p>	<p><i>Points Available</i></p> <p>2</p>
<p><u>LB-26: Paints and Coatings Emissions²</u></p> <p>Product may assist in a project obtaining this credit by reducing indoor air contaminants resulting from the use of paints and coatings. Credit point is achieved where 95% of all surface areas covered by paints and coatings meet or are less than the maximum TVOC Content Limits Values for Paints and Varnishes as stated in Annex II, Table A of European Directive 2004/42/CE: 2004.</p>	<p><i>Points Available</i></p> <p>1</p>

BREEAM Gulf Issue 2.0

ENERGY

<p><u>Ene 1 – Reduction of CO₂ emissions¹</u></p> <p>Product is likely to assist in a project obtaining credits as it demonstrates an improvement in the energy efficiency of a building's systems and therefore achieves lower operational related CO₂ emissions. Number of points awarded is dependent on percentage improvement over the established baseline.</p>	<p><i>Points Available</i></p> <p>15</p>
<p><u>Hea 9 – Volatile Organic Compounds: Decorative paints and varnishes²</u></p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for VOC content and fungal and algal resistant for decorative paints and varnishes. Products that meet the BSEN 13300:2001 referred to the requirements of Decorative Paint Directive 2004/42/CE are compliant with this credit. To achieve credit point all product types under credit Hea 9 used in the project must be in accordance with the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>1</p>

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¹ Thermal benefits of coatings are not applicable when used in interior applications not exposed to solar radiation

² This product is not likely to be used internally, but might be a contiguous finish with external painting (particularly in foyer areas).

ASSESSMENT COMPARISON

Non reflective and solvent based horizontal surface coatings



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RELATED TOPICS

Paints, coatings, thermal comfort

CSI CATEGORY & NUMBER

09900	Paints and Coatings
09910	Paints
09920	Exterior Paints
09960	High-Performance Coating

NBS CATEGORY & NUMBER

Building and Residential Services

M60 Painting / Clear finishing

Landscaping

M60 Painting / Clear finishing

NATSPEC CATEGORY & NUMBER

0641	Applied wall finishes
0671	Painting

ASSESSMENT CRITERIA SATISFIED

ENERGY/GREENHOUSE
<ul style="list-style-type: none">Potential less GHG / ODP down stream
HABITAT & LAND
<ul style="list-style-type: none">Reduced terrestrial impact
RESOURCE DEPLETION & EFFICIENCY



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- Reduced Material Use

HUMAN HEALTH

- Low / Reduced Offgassing

POLLUTION TO ENVIRONMENT

- Reduced chemical toxicity through Life Cycle
- Low / no carcinogens through Life Cycle
- Reduced smog-forming potential

OTHER VITAL SIGNS

- MSDS
- Independent Verification
- Documented Manufacturer Claim
- Environmental info about product
- National / International Standard
- ISO 14001 Certification

SUPPLIER DETAILS

Tiger Profiles & Insulation LLC

Sharjah Industrial Area 2

PO Box 23499

Sharjah, UAE

Telephone: + 971 6 5338449

Fax: + 971 6 5336673

Email: rosy.salam eh@tigerprofiles.com



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