

Access Pacific – Durapine™ CQ Exterior Timbers and GreenGuard™ FSC Timbers [ECG-Premium]

Overview

High Grade FSC Chain of Custody Certified exterior and interior timbers. Suitable for residential and commercial exterior and interior applications.

Product Description

Durapine™ products are high grade exterior timbers manufactured from FSC Chain of Custody Certified (CoC) pressure treated and kiln dried. After drying timber is treated with copper quaternary based wood preservative (ACQ or MCQ) for increased durability, which is free of arsenic or chrome solvents, an alternative to the commonly used CCA (copper, chrome, arsenic) treatment that is banned in some countries in water and personal contact applications.

GreenGuard™ products are high grade interior timbers manufactured from FSC Chain of Custody certified (CoC) timber treated with very low VOC and low energy consumption boron based wood preservative *GreenGuard™*. Timber does not need to be kiln dried after treatment reducing the embodied energy. *GreenGuard™* is based on borates, azoles and insecticides for fungal and insect protection.

Durapine™ and *GreenGuard™* products are available pre-coated and pre-cut for site waste minimisation. *Durapine™* is suitable for various uses including pergolas, weatherboards, deck structures, sleepers, screening, cladding, handrails, fencing and retaining walls, and *GreenGuard™* suitable for interior linings, mouldings and structural timbers, can also be used in exterior vertical applications when protected with paint or stain and not exposed to the ground.



PRODUCT SPECIFICATIONS

Options	<i>Durapine™</i> Decking/Cladding/Screening 70x21, 90x21, 70x28, 95x28, 145x28, 90x35, 140x35 Structural 70x35, 90x35, 140x35, 190x35 70x45, 90x45, 140x45, 190x45, 240x45, 290x45 Lengths 2.4m - 6.0m <i>GreenGuard™</i> InGrain Prefinished Lining 90x12, 140x12 Bulletproof Preprimed Cladding 140x21 Structural Timbers 70x35, 90x35, 140x35, 190x35 70x45, 90x45, 140x45, 190x45, 240x45, 290x45 Lengths 2.4m - 6.0m
Colours	Natural and pre-coated
Warranty	<i>Durapine™</i> 25 years minimum warranty <i>GreenGuard™</i> 15 years minimum warranty
Expected Life	<i>Durapine™</i> Residential – 50 years Commercial – 50 years <i>GreenGuard™</i> Residential – 25 years Commercial – 25 years



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Indicative Costs	<p>Cost of Supply</p> <ul style="list-style-type: none"> • Decking/Cladding - \$A120/m² • Structural - \$A700m³ <p>Cost of Installation</p> <ul style="list-style-type: none"> • Contact your builder <p>Cost of Supply (approximate)</p> <ul style="list-style-type: none"> • Lining/Cladding - \$A150/m² • Structural - \$A600m³ <p>Cost of Installation</p> <ul style="list-style-type: none"> • Contact your builder
Purchase Options	-
Constituents	<p><i>Durapine</i>[™] FSC Pure and Mixes Sources Certified Radiata Pine – 98% b/w Osiose ACQ NatureWood or MCQ MicroPro – 2% b/w Product Mass: 450kg/m³</p> <p><i>GreenGuard</i>[™] FSC Pure and Mixes Sources Certified Radiata Pine – 99% b/w <i>GreenGuard</i>[™] Treatment – 1% b/w</p>
National & International Standards	<p>Timber FSC CoC – SCS-COC-001281 MAF New Zealand</p> <p>Preservative Treatments certified to NZS3640 and AS1604 Osiose ACQ NatureWood or MCQ MicroPro APVMA and ERMA, and <i>GreenGuard</i>[™] Treatment ERMA National Association of Home Builders (NAHB) 'Green approved product' for both ACQ or MCQ MicroPro (MCQ) – Environmentally Preferable Treated Wood Process based on Life-Cycle Assessment certified by the Scientific Certification Systems (SCS)</p> <p>Other NZS3631 NZs3640 AS1720 AS1604 CTB P+</p>
Country of Origin	Manufactured in Papakura Auckland
Projects	<p>Asia Phuket Marina – Phuket Thailand – www.royalphuketmarina.com The 2 Villas – Phuket, Thailand – www.twovillas.com Sepang Gold Coast – Sepang Malaysia – www.sepanggoldcoast.com</p> <p>Australasia Dorrington Architectural Home, Auckland, New Zealand Anderson Home, Auckland, New Zealand</p> <p>Africa Li Tung Sang Development, Mauritius Round Island, Seychelles – www.round-island.net Four Seasons Hotel, Seychelles</p> <p>Samoa American Samoa Airport, Pago Pago</p> <p>French Polynesia FEI Social Housing, Tahiti</p>
Preparation	Not applicable.

ECOSPECIFIER LIFE-CYCLE ASSESSMENT INTEGRATED DESIGN AND POLICY ISSUES

Timber and wood products manufactured from well managed forest plantations are potentially among the most sustainable products designers can specify due to their low embodied energy, carbon sink qualities and potential durability when used for structural, cladding, lining, flooring, joinery or decorative purposes. Timber is potentially an important means of reducing climate change through the



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locking of carbon into building structures. Timber is also directly beneficial in reducing greenhouse gases in the atmosphere, as responsibly grown and managed forest growth results in the fixation of CO₂.

Radiata Pine is a versatile, high strength, lightweight, softwood timber. *Durapine*[™] can be used in applications exposed to group atmosphere or insect attack as it is available pre treated with Osmose ACQ or MCQ, an alternative to the commonly used CCA treatment. Product is suitable for use in Hazard Classes 1 to 4 (see Glossary). MicroPro[™] treatment is approved for aluminium contact making wood treated with this more flexible in use.

GreenGuard[™] treatment is based on Borates, Azoles and insecticides for fungal and insect protection making it highly durable in an interior and some exterior environments. GreenGuard[®] treated timber is suitable for use in H1.2 and H3.1 if used externally such as vertical exterior walls where water can drain, and provided it is not in contact with the ground.

Products are available precut to minimise on site waste.

HUMAN HEALTH

Health

Product does not adversely affect human health in use.

GreenGuard[™] timbers are heavy metal and VOC free. Treatment is based on Borates, Azoles and insecticides for fungal and insect protection. Similar LOSP treatments are organic solvent based where as *GreenGuard*[™] is water based.

GreenGuard[™] actives are compliant with the European Biocide Directive 98/8/EC, as confirmed by an independent assessment.

OH&S in Manufacture *Durapine*[™]: Copper is a natural element that is required in balanced diets for healthy living. In high doses it can however cause serious effects and is bioaccumulative.

Ammonium Compounds can also have significant consequences if ingested. Care should be taken in immersion baths against splashing and when handling timbers manually while treatment is wet.

Proper OH&S safeguards and glove handling of products will mitigate potential risks of splash and exposure to liquid preservative.

See *Issue of Concern* Below.

Comfort

Radiata Pine has a thermal conductivity of 0.10-0.14W/mk at 12% Moisture Content. When used internally this can contribute to thermal comfort of occupants.

Indoor Environment Quality

GreenGuard[™] timber treatments have very low VOCs emissions unlike similarly used LOSP treatments, as confirmed in an independent assessment. *GreenGuard*[™] products also have no added formaldehyde. This contributes to healthier Indoor Air Quality (IAQ).

Electromagnetic Radiation

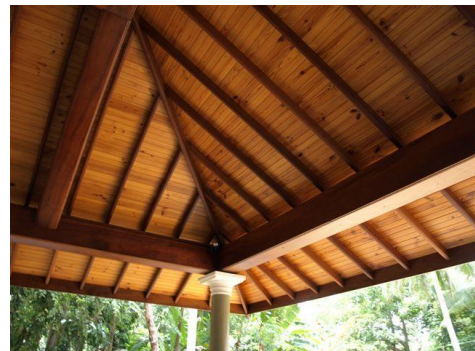
Not applicable.

Safety

Not applicable.

Accessibility

Not applicable.



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ECOLOGICAL QUALITY

Terrestrial

Emissions – Wood is sourced from FSC certified forests. Responsibly grown and managed forests sequester more CO₂ than they emit during their growing phase. Wood products are carbon sinks, whereas most other products produce net carbon emissions such as aluminium, plastic and steel, thereby reducing the toxic and pollutant impacts of wood on the terrestrial environment.

Treated wood is based on copper quaternary preservative, used instead of CCA which has the potential to leach chrome and arsenic into the environment.

Physical – Sourcing of timber from locally FSC managed forests significantly reduces the following impacts. Impacts to the terrestrial environment from forestry include loss of topsoil and reduced soil productivity due to nutrient loss, and clearing of land for operational activities. Further land impacts are derived from transport and processing of wood.

Aquatic

Emissions – The following impacts are significantly minimised due to the regulatory and management practises in place in the FSC Certified plantations timber is sourced from. Aquatic pollution occurs from nutrients (sediment, phosphorous and nitrogen) contamination of local water bodies from soil and chemical runoff (pesticides, fuel etc).

Treated wood is based on copper quaternary preservative, used instead of CCA which has the potential to leach chrome and arsenic into the environment.

ACQ and MCQ and *GreenGuard*TM treatments and preservatives contain components that are highly toxic in the aquatic environment and contain chemicals with the following R phrase; very toxic to aquatic organisms (R50). Care should be taken during treatment of timber to avoid spills or leaks entering drains and water courses where serious loss of aquatic life may result, therefore accidental release measures and disposal considerations should be followed. Refer MSDS. Treated timber is not considered a risk in use as ecotoxic chemicals are not biocumulative, are readily degradable and dilutable.

Physical – Not known.

Atmosphere

Greenhouse (GHG) – Fossil fuel consumption and associated greenhouse gas emissions associated with the production of this product result from forestry operations, transportation of wood, wood processing and kiln drying. Manufacture of *Durapine*TM uses the following energy sources; wood waste to heat kilns and create electricity, Geothermal heat to heat kilns, gas to heat kilns and electricity used for the sawmill. Use of wood waste and geothermal heat as an energy source minimises green house gas emissions associated with fossil fuel based energy sources. *GreenGuard*TM timbers are energy efficient during manufacture as they do not require re-kilning after treatment is applied, and do not require pressure treating when treatments are applied to the timber, due to carrier chemicals which carry treatment into the wood. This process minimises energy and green house gas emissions associated with manufacture.

The ability of timber products to store absorbed carbon and emit minimal greenhouse gases during production is a major consideration when comparing timber to alternative materials.

Greenhouse intensity – Treated Pine timber has a GHG of **negative** 699kgCO₂/m³*

*Figure sourced from Alcorn University New Zealand.

Transport intensity – Product is manufactured in New Zealand. GHG intensities for shipping product are shown below. Shipping port from country of origin is Auckland.

Product weight	Energy Intensity - Container Shipping	GHG Intensity - Container Shipping
450kg / m ³	0.000135MJ / kg.km	0.000011kgCO _{2e} / kg.km



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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.

Operational efficiency – Not applicable.

Re-use Efficiency – Durapine™ can be ‘downcycled’ for use as wood waste for heating in approved kilns.

Toxics and Pollutants – None known.

Ozone Depletion – Not applicable.

Urban Heat Island Effects – Not applicable.

Noise – Timber has sound absorption properties.

Biodiversity

Wood-based products can be among the most environmentally destructive material choice from a biodiversity and ecological quality point of view, when poor, unregulated forestry practices are in place. This can lead to the loss and fragmentation of vegetation and habitat for ecological communities. Biodiversity impacts are minimised due to the regulatory and management practices in place in FSC Certified forests.

Further as pine is a softwood plantation timber its use avoids the use of durable species of hardwood timbers which are often sourced from old growth forests, with high biodiversity and conservation value. Part of APL’s wood policy is not to source timber from natural forest that has been converted to plantations or non-forest use, and part of FSC plantations standard normally does not certify timbers from natural forest areas converted to plantations after November 1994.

Use of alternative CCA treatment has reduced biodiversity impacts, such as animal fatalities through the ingestion of wood ash from burnt CCA-treated timber.

Permethrin, part of the synthetic pyrethroid family is a widely used agricultural pesticide, it is also toxic to many non target animals including insects, fish, birds and amphibians. Use of permethrin in products is not considered to adversely affect biodiversity due to small concentrations and application of products.

RESOURCE DEPLETION

Resource Efficiency

Wood is a renewable resource when harvested sustainably. Softwood timbers have a shorter yield cycle when compared to hardwood timbers.

Embodied Fossil Fuel Energy

Treated Pine timber has an EE of 1179MJ/m³*

*Figure sourced from Alcorn University New Zealand.

Transport intensity – Products are manufactured in New Zealand. Shipping port from country of origin is Auckland.



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Embodied Water

Approximately 300L/m³ is used in manufacture of *Durapine*TM, mainly during the pressure treating process.

Approximately 30L/m³ is used in the manufacture of *GreenGuard*TM timbers.

Durability

Softwood timbers decompose easily when exposed to environmental conditions and are not as durable as hardwood timbers. However *Durapine*TM is highly durable due to treatments/preservatives used (ACQ and MCQ) with an expected lifespan of more than 50 years. Product can be used in a range of environments; H1-H4 (see Glossary).

*GreenGuard*TM timbers are highly durable when used in appropriate applications. Cannot be used in exterior applications which have soil contact, for H1.2 and H3.1 exterior environs only.

Reusability

Wood can be reused as temporary construction formwork applications or untreated wood for fuel in furnaces.

Repairability

Can be resurfaced or components replaced.

Design for Dematerialisation

No.

Design for Disassembly

Products are screwed and/or nailed together so can be easily disassembled.

Recyclability

Products may be 'downcycled' for use as feedstock in approved furnaces. Access Pacific is working on R&D scheme in place to recycle treated waste wood in solid form. Recycling outside of this scheme is unlikely due to contamination issues with treated wood.

Maintenance

Coated product requires repainting or coating every 3 years. Uncoated product requires no maintenance.

Product Takeback Scheme

No.

Extended Producer Responsibility (EPR)

No.



CORPORATE AND SOCIAL SUSTAINABILITY

Audits and Environmental Reporting

Yes – FSC auditing for CoC certification.

Convictions

No.

Environmental Policy

Yes, controlled wood policy. All FSC and PEFC wood marketed by APL is controlled to ensure the following

- Wood Harvested from areas where traditional or civil rights are violated



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- Wood harvested from non FSC-certified areas having high conservation values which are threatened
- Wood harvested from genetically modified (GM) trees
- Illegally harvested wood
- Natural forest that has been converted to plantations or non-forest use.

Social Enhancement Programs

No.

Technology Transfer Programs

A programme is being developed with partners in South Africa and the Philippines for technology transfer of GreenGuard® wood preservative for low cost wood preservation.

Environmental Management Systems (EMS)

No. Access Pacific is working towards ISO 14001 certification, with certification expected in 2010.

ECOSPECIFIER ISSUES OF CONCERN / RED LIGHTS

Issue of Concern

Products contain wood. Dust from sawing and forming operations will contain a high percentage of wood dust. Wood dust has been classed as carcinogenic to humans (Group 1), according to the International Agency for Research on Cancer (IARC). This is a common issue for all wood-based products. 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.

The durability treatment in liquid form if ingested, may cause damage to organs through prolonged or repeated exposure, to liver kidneys and central nervous system. Proper OH&S safeguards and glove handling of products will mitigate potential risks of splash and exposure to liquid preservative.

Note: similar OH&S warnings exist for galvanized and zincalume steel coatings as well.

ECOSPECIFIER GREENRATE GREEN BUILDING SCHEME PRE-ASSESSMENT

ESTIDAMA Pearls Design System for New Buildings

LIVEABLE BUILDINGS

<p>LB-r3: Formaldehyde Reduction [1]</p> <p>Product may assist in a project obtaining this requirement by eliminating the human health risks associated with formaldehyde in building materials and products.</p>	<p><i>Points Available</i></p> <p>Requirement</p>
<p>LB-13 Private Outdoor Facilities [3]</p> <p>Product may assist in a project obtaining this credit where private outdoor space is provided for at least 90% of the building's units determined by EPDS. Credit point is achieved if the private external spaces are directly adjacent to and directly accessible from the unit; are not be publicly accessible; 95% of the balconies are shaded from direct sunlight for a minimum of three hours between 9am and 5pm, as measured on 21July; and include a facility for drying clothes outdoors in a visually shielded area.</p>	<p><i>Points Available</i></p> <p>1</p>

STEWARDING MATERIALS

<p>SM-r1: Certified Timber</p> <p>Product may assist in a project obtaining this requirement as it comes from an EPDS recognised Chain of Custody Certified legal and verifiable source.</p>	<p><i>Points Available</i></p> <p>Requirement</p>
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<p>SM-2: Replacement of High Carbon Intensity Materials</p> <p>Product may assist in a project obtaining this credit for using materials with lower carbon intensity than the materials commonly used in large buildings for structural purposes. Credit point is awarded where the value of composite, large-section timber used as a replacement of high carbon intensity materials constitute at least 2% of the total construction cost.</p>	<p><i>Points Available</i></p> <p>1</p>
<p>SM-7: FSC-certified Timber</p> <p>Product may assist in a project obtaining this credit for rewarding sustainable timber harvesting practices that support biodiversity and minimise ecological impacts. 1 credit point is awarded if 50%, 2 credit points if 95% of the wood, composite wood or compressed paper products used on the project during design and construction are Forest Stewardship Council (FSC) Chain of Custody certified or are reused.</p>	<p><i>Points Available</i></p> <p>2</p>

LEED® for Green Interior Design and Construction- Version 3 (see disclaimer below)

MATERIALS & RESOURCES

<p>MR Credit 7: Certified Wood</p> <p>Product is likely to assist in a project obtaining this credit as it is in whole (or in part) certified in accordance with Forest Stewardship Council's (FSC) Principles and Criteria. To achieve credit point a minimum of 50% of total virgin wood products used in the project must be FSC certified.</p>	<p><i>Points Available</i></p> <p>1</p>
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LEED® for New Construction & Major Renovations - Version 3 (see disclaimer below)

MATERIALS & RESOURCES

<p>MR Credit 7: Certified Wood</p> <p>Product is likely to assist in a project obtaining this credit as it is in whole (or in part) certified in accordance with Forest Stewardship Council's (FSC) Principles and Criteria. To achieve credit point a minimum of 50% of wood based materials including structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes (must be permanently installed) used in the project must be FSC certified.</p>	<p><i>Points Available</i></p> <p>1</p>
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BREEAM Issue 3 (see disclaimer below)

MANAGEMENT

<p>Man 3 – Construction site impacts: Site Timber</p> <p>Product may assist in a project obtaining credits as it meets the requirement for all site timber to be legally sourced and 80% of site timber to be responsibly sourced from a supplier capable of providing certification to a third party certification scheme.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat 5 – Responsible Sourcing of Materials</p> <p>Product is likely to assist in a project obtaining credits as it contributes to the responsible sourcing of materials for major building elements. Credit points are achieved where 80% of assessed materials for building elements (roof, frame, external walls, ground and upper floors, foundations/substructure, doors and windows) are responsibly sources. 100% of timber used for these elements must have 3rd party chain of custody certification.</p>	<p><i>Points Available</i></p> <p>4</p>
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Green Building Index Non-Residential New Construction Version 1 (see disclaimer below)

MATERIALS AND RESOURCES

MR4 Sustainable Timber Product is likely to assist in a project obtaining credit point for complying with Forest Stewardship Council and Malaysian Timber Certification Council requirements. To achieve point at least 50% of wood-based materials and products used on the project are certified.	<i>Points Available</i> 1
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Green Building Index Residential New Construction Version 1 (see disclaimer below)

MATERIALS AND RESOURCES

MR6 Sustainable Timber Product is likely to assist in a project obtaining credit point for complying with Forest Stewardship Council and Malaysian Timber Certification Council requirements. To achieve point at least 50% of wood-based materials and products used on the project are certified.	<i>Points Available</i> 1
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National Australian Built Environment Rating System (NABERS) Compatibility

Product does not assist in the achievement of credit points in this rating tool.

BASIX Building Sustainability Compatibility

Product does not assist in the achievement of credit points in this rating tool.

Green Star™ Office Interiors Version 1.1 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

IEQ-12: Formaldehyde Minimisation [1] Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for composite wood products. Products with formaldehyde emission of less than or equal to E1 are compliant with this credit. To achieve credit points all composite wood products used in the project must be in accordance with these requirements.	<i>Points Available</i> 2
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MATERIALS

Mat-3 Note-1: Walls and Partitions [1] (also see material calculator below) Product is likely to assist in a project obtaining credits as it meets in whole (or in part) the prescribed requirements for wall and partitions. Credit points are achieved when a product has a reduced environmental impact as determined by the Mat-3 Walls and Partitions Calculator. See Calculator results under the <i>ecospecifier Greenrate Green Building Pre-Assessment</i> section in relevant product listing. <i>Product may contribute as an individual component, in combination with other suitable components, in achieving walls and partitions which comply in whole (or in part) with the prescribed requirements. See Mat-3 Walls and Partitions Calculator (Sub-Component Adaption) under the ecospecifier Greenrate Green Building Pre-Assessment section (in relevant product) listing for clarification on the criteria the product meets.</i>	<i>Points Available</i> 3
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Green Star™ Mat-3 Walls and Partitions Calculator *

Eco Preferred Content	Durability	Environmental Management System (EMS)	EMS ISO 14001 Certified?	EMS - Waste Minimisation	EMS - Energy Consumption	EMS - Emissions	EMS – Materials Minimisation	Product Stewardship	Modularity	Designed for Dis-assembly
Greater than 20%	Greater than 10yrs	No	No	No	No	No	No	No	Sub component	Sub component

*Modified by ecospecifier for presentation purposes. Source – Green Star Office Interiors v1.1 Rating Tool

<p>Mat-11: Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber and composite timber requirements as being either post-consumer re-used timber or timber certified under a forestry standard which satisfies the five ‘essential’ criteria. To achieve credit points all timber and timber composite products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Office Design Version 2 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-14: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products. Products with formaldehyde emissions of less than or equal to E1 are compliant with this credit. To achieve the credit point all engineered wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-8: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber and composite timber requirements as being either reused timber, post-consumer recycled timber or Forest Stewardship Council (FSC, Chain of Custody) Certified Timber. To achieve credit points 95% of timber and timber composite products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Office Design Version 3 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-14: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products. Products with formaldehyde emissions of less than or equal to E1 are compliant with this credit. To achieve the credit point all engineered wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-8: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber and composite timber requirements as being either reused timber, post-consumer recycled timber or Forest Stewardship Council (FSC, Chain of Custody) Certified Timber. To achieve credit points 95% of timber and timber composite products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Retail Centre Version 1 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-9: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credit point as it meets the prescribed standards for formaldehyde emissions for engineered wood products. Products with formaldehyde emission of less than or equal to E1 are compliant with this credit. To achieve credit points all engineered wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-7: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber and composite timber requirements as being either post-consumer, re-used timber, or timber certified under a forestry standard which satisfies the five 'essential' criteria. To achieve credit points 95% (by cost) timber products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Education Version 1 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-9: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products (including exposed and concealed applications). Products with no formaldehyde or formaldehyde emissions of less than or equal to E1 are compliant with this credit. To achieve credit points all engineered wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-7: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber requirements as being either post-consumer, re-used timber or timber certified under a forestry standard which satisfies five 'essential' criteria. To achieve credit points 95% (by cost) of timber products must meet the prescribed requirements</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Industrial Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-9: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products. Products with formaldehyde emission of less than or equal to E1 are compliant with this credit. To achieve credit points all composite wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-7: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber and composite timber requirements as being either post-consumer re-used timber or timber certified under a forestry standard which satisfies the 5 'essential' criteria. To achieve credit points 95% (by cost) timber products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Multi Unit Residential Version 1 Compatibility (see disclaimer below)

INDDOR ENVIRONMENT QUALITY

<p>IEQ-9: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products (including expose and concealed applications). Products with formaldehyde emission of less than or equal to EO are compliant with this credit. To achieve credit points all engineered wood products used in the project must be in accordance with these requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
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MATERIALS

<p>Mat-7: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber products used in building and construction works requirements for 95% (by cost) of timber as being either post-consumer recycled timber, re-used timber or timber certified under a forestry standard which satisfy's the five 'essential' criteria.</p>	<p><i>Points Available</i></p> <p>2</p>
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<p>Mat-14 Note 1: Internal Walls(also see material calculator below) [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets in whole (or in part) the prescribed requirements for internal wall products. Credit points are achieved when a product has a reduced environmental impact relative to available alternatives as determined by the <i>Mat-14 Internal Walls Calculator</i>. See Calculator results under the <i>ecospecifier Greenrate Pre-Assessment</i> section in relevant product listing.</p> <p><i>Product may contribute as an individual component, in combination with other suitable components, in meeting the requirements of Mat-14: Internal Walls.</i></p>	<p><i>Points Available</i></p> <p>2</p>
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Green Star™ Mat-14 Internal Walls Calculator *

Eco Preferred Content	Durability	Environmental Management System (EMS)	EMS ISO 14001 Certified?	EMS - Waste Minimisation	EMS - Energy Consumption	EMS - Emissions	EMS – Materials Minimisation	Product Stewardship	Modularity	Designed for Dis-assembly
>20%	>10yrs	No	No	No	No	No	No	No	Sub component	Sub component



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**Modified by ecospecifier for presentation purposes. Source – Green Star Multi Unit Residential v1 Rating Tool*

LAND USE AND ECOLOGY

<p>Eco-5 Note-1: Outdoor Communal Facilities [2]</p> <p>Product is likely to assist in a project obtaining credits as it contributes towards outdoor communal facilities used for a broad range of activities. Credit points are achieved where 25% of total site area is developed for communal facilities, a maintenance manual is provided and a specified number of the following are achieved – composting facilities, garden plots, worm farms, in ground deep soil planting, playground areas, open landscaped areas, sun shaded areas, outdoor gyms, swimming pools, retained bushland, seating, outdoor dining and barbeque facilities in accordance with the prescribed requirements.</p> <p><i>Product may contribute as an individual component, in combination with other suitable components, in providing facilities for .composting, garden plots, worm farms, playgrounds, sun shading, swimming pools, seating, dinning and barbeques.</i></p>	<p><i>Points Available</i></p> <p>3</p>
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Green Star™ Healthcare Version 1 Compatibility (see disclaimer below)

<p>IEQ-9: Formaldehyde Minimisation [1]</p> <p>Product is likely to assist in a project obtaining credits as it meets the prescribed standards for formaldehyde emissions for engineered wood products. Products with formaldehyde emission of less than or equal to E1 or contain no are compliant with this credit. To achieve credit points all composite wood products used in the project must be in accordance with these prescribed requirements.</p>	<p><i>Points Available</i></p> <p>1</p>
<p>IEQ-19: Places of Respite [3]</p> <p>Product is likely to assist in combination with other products in a project obtaining this credit as it contributes to places of respite, in accordance with the prescribed requirements for noise exposure, shading, daylight factor, natural ventilation/mechanical ventilation.</p>	<p><i>Points Available</i></p> <p>1</p>

MATERIALS

<p>Mat-7: Sustainable Timber</p> <p>Product is likely to assist in a project obtaining credits as it meets the timber requirements for timber products used in the building and construction works as being either post-consumer recycled timber, re-used timber or certified under a forestry scheme which satisfies five 'essential' criteria. To achieve credit points 95% (by cost) of timber products must meet the prescribed requirements.</p>	<p><i>Points Available</i></p> <p>2</p>
<p>Mat-14 Note 1: Internal Walls(also see material calculator below) [1]</p> <p>Product is likely to assist in a project obtaining credit point as it meets the prescribed requirements for ceilings, walls and partitions products. Credit points are achieved when a product has a reduced environmental impact as determined by the Mat-14 Ceilings, Walls and Partitions Calculator. See Calculator results under the ecospecifier Greenrate Pre-Assessment section in relevant product listing.</p> <p><i>Product may contribute as an individual component, in combination with other suitable components, in achieving Ceilings, Walls and Partitions which comply in whole (or in part) with the prescribed requirements. See Mat-13 Loose Furniture Calculator (Sub-Component Adaption) under the ecospecifier Greenrate Pre-Assessment section in relevant product listing for clarification on the criteria the product meets</i></p>	<p><i>Points Available</i></p> <p>2</p>



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Green Star™ Mat-14 Internal Walls Calculator *

Eco Preferred Content	Durability	Environmental Management System (EMS)	EMS ISO 14001 Certified?	EMS - Waste Minimisation	EMS - Energy Consumption	EMS - Emissions	EMS – Materials Minimisation	Product Stewardship	Modularity	Designed for Dis-assembly
>20%	>10yrs	No	No	No	No	No	No	No	Sub component	Sub component

*Modified by ecospecifier for presentation purposes. Source – Green Star Healthcare v1 Rating Tool

[1] Applicable to GreenGuard products only.

[2] May contribute to Outdoor Communal Facilities as part of a sun-shaded area, garden and outdoor dining

[3] May contribute to Places of Respite which are outdoors as a shading structure, e.g. pergolas

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ASSESSMENT COMPARISON

Standard vinyl flooring, linoleum, rubber, plasterboard, fibre cement

RELATED KNOWLEDGE BASE ARTICLES

Eco Priority Guide: Timber and Wood Products

Technical Guide: Timber & Wood Products

RELATED TOPICS

Hardboard Underlay, Adhesives & Sealants, Timber sourcing

CSI / SPECPACK CATEGORY & NUMBER

06120 Structural Panel

09960 High Performance Coating

NBS CATEGORY & NUMBER

Building and Residential Services

H21 Timber Weatherboarding

K20 Timber board flooring, decking, sarking, linings and casings

Commercial Engineering & Services

Not applicable.

Landscaping

H21 Timber weatherboarding

Q55 External decks, boardwalks and pergolas



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ASSESSMENT CRITERIA SATISFIED

ENERGY/GREENHOUSE
<ul style="list-style-type: none">• Low energy in production• Potential less GHG/ODP down stream
HABITAT & LAND
<ul style="list-style-type: none">• Reduced terrestrial impact
RESOURCE DEPLETION & EFFICIENCY
<ul style="list-style-type: none">• Abundant• Reduced transport energy• Reduced Material Use
HUMAN HEALTH
<ul style="list-style-type: none">• Low/Reduced Offgassing• Reduced toxics or carcinogens
REDUCES POLLUTION
<ul style="list-style-type: none">• Reduced Life Cycle Toxicity
OTHER VITAL SIGNS
<ul style="list-style-type: none">• National / International Standard• MSDS• Ecolabel• Independent Verification• Doc Manuf Claim• Environmental Info about product• Environmental Policy



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SUPPLIER / MANUFACTURER DETAILS

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Information last verified on 18/12/2009.

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David Baggs | Technical Director & Principal Consultant
Chartered Architect, FAIA, ABSA, Green Star AP, LEED AP, MRoySocAS



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