



Green Star

GUIDE FOR SUSTAINABLE CONSTRUCTION

DISCLAIMER

Products manufactured and systems designed by Knauf are produced in accordance with the Building Code of Australia and relevant Australian Standards. Knauf Plasterboard Pty Ltd will not be held responsible for any claims resulting from the installation of its products or other associated products not in accordance with the manufacturer's technical literature or relevant Australian Standards.

Knauf technical information is regularly updated. To ensure this document is current with the latest information, visit **knaufplasterboard.com.au** or please contact Knauf Customer Service Centre on **1300 724 505**.

WARRANTY

Knauf products are guaranteed by a 10 Year Warranty. Visit **knaufplasterboard.com.au** for details.

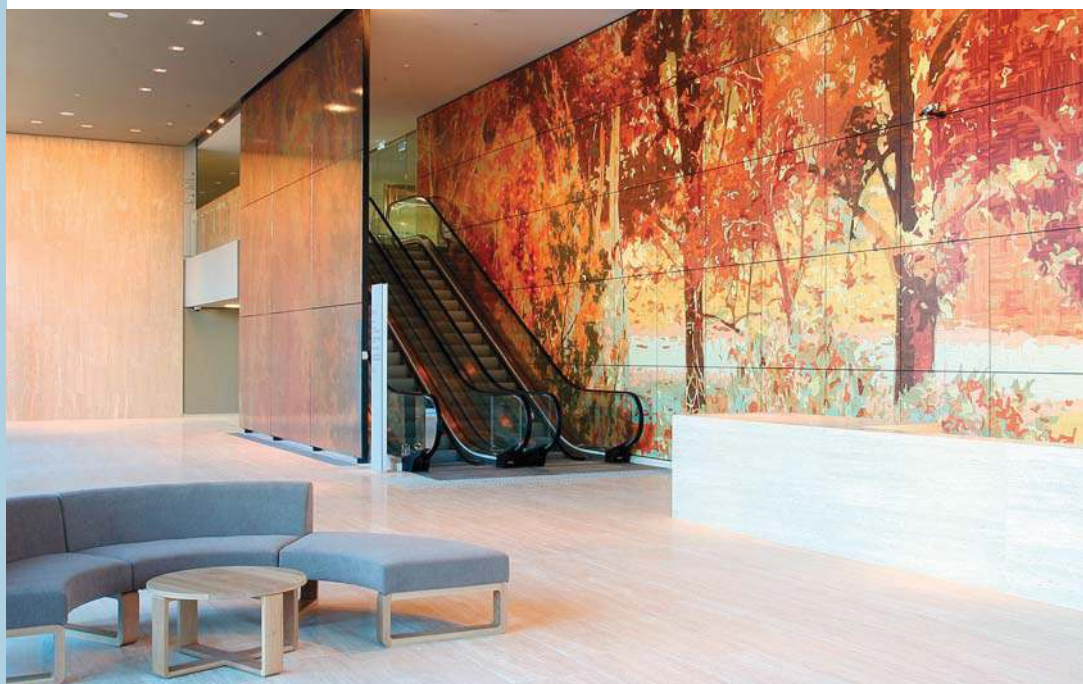
VERSION 4

April 2014



Quality
ISO 9001
SAI GLOBAL

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The Green Star rating scheme is a widely recognised approach to sustainable building in Australia. Created by the Green Building Council of Australia (GBCA), the voluntary system evaluates the environmental design, construction and soon the performance of buildings.

Green Star ratings are awarded for the entire project, taking into account site selection, design, construction and maintenance. A project is assessed using a “rating tool” and approved by the GBCA depending on the type of building.

Rating tools for the commercial construction market sector include offices, retail, healthcare and education. Each rating tool has been developed to measure the different environmental factors in the specific construction type. For example, operation and plans for waste management and recycling are considered as more important in retail developments, than when compared to education and office fit-outs. Green Star rating tools are completed by a Green Star Accredited Professional.

This document provides information on how Knauf products, systems and services can contribute to Green Star rating points in the categories of:

- Management (MAN)
- Indoor Environment Quality (IEQ)
- Materials (MAT).

Knauf’s sustainability documentation can be downloaded from: www.knaufplasterboard.com.au/sustainability-documents

Download any document from within the Green Star Guide by clicking on its image.

ACHIEVING GREEN STAR POINTS

Green Star ratings are awarded by the GBCA in an independent process. Only the GBCA can certify a project for a Green Star rating.

There are currently two Green Star ratings – “Design” for buildings certified for their design and “As Built” for buildings certified for their actual construction after completion of the project. A new rating system “Performance” is under development to assess the operational performance of existing buildings.

Overall, there are nine categories in each Green Star calculator:

1. Management
2. Indoor Environment Quality
3. Energy
4. Transport
5. Water
6. Materials
7. Land Use & Ecology
8. Emissions
9. Innovation

These categories are divided into credits, with points awarded within the credit for various criteria. Once all credits are assessed, a percentage score is calculated and Green Star environmental weighting factors are applied. Environmental weighting factors vary across states and territories to reflect the local environmental concerns.

There are ten Green Star rating tools covering commercial and multi-residential construction, and two rating tools in pilot mode (Communities and Interiors). The Performance Tool is under development. Within each rating tool there are three categories where Knauf products and services contribute to Green Star points: Materials, Indoor Environment Quality and Management. The maximum points contribution depends on the project type.

TABLE 1 Green Star Rating Tools and Categories Applicable for Knauf Products, Systems and Services

Green Star Rating Tool	Materials (MAT)	Indoor Environment Quality (IEQ)	Management (MAN)
Education v1		IEQ-7 & IEQ-8	MAN-7
Healthcare v1	MAT-14	IEQ-7 & IEQ-8	MAN-7
Industrial v1		IEQ-7 & IEQ-8	MAN-7
Multi Unit Residential v1	MAT-14	IEQ-7 & IEQ-8	MAN-7
Office v3		IEQ-12 & IEQ-13	MAN-7
Office as Built v2		IEQ-12 & IEQ-13	MAN-7
Office Design v2		IEQ-12 & IEQ-13	MAN-7
Office Interiors v1.1	MAT-3	IEQ-10 & IEQ-11	MAN-6
Retail Centre v1		IEQ-7 & IEQ-8	MAN-7
Public Building v1	MAT-12	IEQ-7 & IEQ-8	MAN-7

Materials



CERTIFIED PRODUCTS

A range of Knauf products are certified by Global GreenTag to GreenRate Level A, a product certification scheme recognised by the GBCA. Level A recognition will result in achieving 100% of the Green Star points within the relevant materials categories.



MAT Assemblies Calculator – Interiors PILOT, Public Building v1

For projects using the new Assemblies or Materials Fitout Calculators for Green Star Ratings tools, these products will achieve a 100% item score under Criterion 3 (Certified Product). The points available for each Fitout Calculator are determined by the Credit Criteria specific to the corresponding Green Star credit in each tool.

TABLE 2 Assemblies Calculator – Product Score for Certified Products

#	Name of Supplier and Brief Description of Item	Total Area of items	Criterion - 1	Criterion - 2	Criterion - 3	Criterion - 4	Criterion - 5	Product Score (%)
			Re-used item	Product Stewardship	Certified Product	Re-used, Recycled or Certified Content	Environmental Management Systems	
	Knauf QuadShield - plasterboard Knauf ImpactShield - plasterboard Knauf MultiShield - plasterboard Knauf FireShield - plasterboard Knauf SoundShield - plasterboard Knauf Designpanel - plasterboard Knauf WaterShield - plasterboard Knauf CurveShield - plasterboard Knauf MastaShield - plasterboard Knauf SpanShield - plasterboard	X			Level A			100%

MAT Walls, Ceilings and Partitions Calculators – Office Interiors V1.1, Healthcare V1 and Multi Unit Residential V1

For projects continuing to use the older MAT calculators, certified Knauf products are categorised as 'Environmentally Innovative' and will automatically achieve a product score of 100%:

- Office Interiors V1.1 - MAT-3 Walls and Partitions calculator (3 points)
- Healthcare V1 - MAT-14 Ceilings, Walls and Partitions calculator (2 points)
- Multi Unit Residential V1 - MAT-14 Internal Walls calculator (2 points).

TABLE 3 Relevant Materials Calculator – Product Score for Certified Products

				Resource Utilisation		Management							Reusability			
Product Classification	Name of Walls or Partitions Product and Supplier	Brief Description of Walls or Partitions	Area of Walls or Partitions (m²)					EMS Includes							Product Score (%)	
				Eco Preferred Content	Durability	EMS	EMS ISO 14001 Certified	Waste Minimisation	Energy	Emissions	Materials Minimisation	Product Stewardship	Modular	Design for Disassembly		
Environmentally Innovative	Knauf	QuadShield	Designpanel	X												100%
		ImpactShield	WaterShield													
		MultiShield	CurveShield													
		FireShield	MastaShield													
		SoundShield	SpanShield													

When selecting these products, aside from a copy of the certification licence no further documentation is required to be submitted for the materials category of Green Star ratings tools. Knauf's Certification documents plus the 10 Year Product Warranty and Product Stewardship are provided on the following pages. For detailed product information refer to the individual product Tech Data on www.knaufplasterboard.com.au/tech data

GREENTAG GREENRATE LEVEL A CERTIFICATE

GREENTAG^{CERT™} **GreenRate | Level A**



Knauf Plasterboard Pty Ltd

This is to Certify that the following Product/s have been found in conformance with the Global GreenTag^{CERT™} Scheme Standard for the Tier and Level noted herein:

MistaShield
QuadShield
SoundShield
WaterShield
SpanShield
CurveShield

ImpactShield
FireShield
MultiShield
MistaDeco
Knauf ONE+

GreenStar™ Credits:

MAT: Ceilings, Walls & Partitions, MAT: Walls & Partitions, MAT: Internal Walls, FIT: Assemblies, IEQ: Reduced Exposure to Pollutants, IEQ: Volatile Organic Compounds (VOC)

Licensed Sites:
NSW, VIC Australia
Licence No.:
KNACG002-B-2013

Licence Date:
1st March 2013

Valid to:
1st March 2015

GreenTag^{CERT™} Standard:
Standard Version 3.1



David Baggs
Chief Executive Officer
Global GreenTag^{CERT™} Program Director

GREENTAG GREENRATE LEVEL A CERTIFICATE – DESIGNPANEL



Knauf Plasterboard Pty Ltd

This is to Certify that the following Product/s have been found in conformance with the Global GreenTag^{CERT™} Scheme Standard for the Tier and Level noted herein:

Designpanel

GreenStar™ Credits:

MAT: Assemblies, MAT: Ceilings, Walls & Partitions, MAT: Internal Walls, MAT: Walls & Partitions, IEQ: Reduced Exposure to Pollutants, IEQ: Volatile Organic Compounds (VOC)

Licensed Sites:

Hobro, Denmark

Licence No.:

KNACG001-A-2012

Licence Date:

17th October 2012

Valid to:

17th October 2014

GreenTag^{CERT™} Standard:

Standard Version 3.1



David Baggs
Chief Executive Officer
Global GreenTag^{CERT™} Program Director



DURABILITY

PRODUCT WARRANTY

KNAUF

Knauf manufactures under a quality system certified as complying with ISO 9001:2008, Quality Management Systems, by an accredited certification body. Knauf supplies products that comply with the relevant Australian Standards and are warranted to be free from defects in materials or manufacture for a period of one year for PFT Machines, two years for Cineo™, and ten years for all other products, from the date of purchase, subject to the conditions stated below.



CONDITIONS OF WARRANTY:

- Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- This warranty is non-transferable.
- This warranty only applies to products and materials which have been used or installed:
 - strictly in accordance with the Knauf's installation documentation current at the time of installation (available at knaufplasterboard.com.au or by calling 1300 724 505) and maintained in accordance with maintenance documentation; and
 - in projects that have been designed and constructed in strict compliance with all relevant provisions of the current Building Code of Australia, regulations and standards.
- The performance of all Knauf systems relies on using the nominated Knauf components. Use of non-Knauf components may reduce a system's fire rating, acoustic rating, appearance or other aspects of performance and may void this warranty.
- To the extent permitted by law, Knauf limits its liability under this warranty to, at its option:
 - Replace the product or;
 - Supply an equivalent product including improved or superior products.
- A claim must be made against this warranty before use or installation if the defect could be reasonably detected. The claim must be submitted in writing within 30 days of discovering the defect and must be accompanied by proof of purchase and sent to Knauf Customer Service, PO Box 447, Altona, VIC, 3018. To contact Knauf Customer Service, email custserv@knaufplasterboard.com.au or call 1300 724 505.
- The costs associated with a claim made against this warranty (i.e. postage) are to be borne by the claimant.
- To the extent permitted by law, Knauf will not be liable for any consequential loss or damage including that caused by products with manufacturing defects.
- This warranty does not apply to any products which are:
 - damaged as a result of a Force Majeure once the products are delivered;
 - repaired or altered outside Knauf's premises in any way which, in Knauf's judgment, affects its performance or reliability or causes any defect in the products or material;
 - damaged as a result of misuse, negligence, accident or any cause other than normal and reasonable use;
 - beyond the normal span of life for that product where less than the express warranty period.
- Knauf will not be liable for claims arising due to poor workmanship, poor design, structural movement or other building movement, any service condition outside those specified as acceptable in Knauf literature (available at knaufplasterboard.com.au) including humidity levels, contact with moisture or liquid water, or high temperatures.
- This warranty constitutes the entire guarantee by Knauf. Except where otherwise provided by the Australian Consumer Law, all other obligations, warranties, both expressed and implied are excluded to the fullest extent allowed by law.

MARK NORRIS
Managing Director

No:

October 2012

Knauf products have been installed in accordance with Knauf specifications. All fields must be completed.

No:

PROJECT NAME AND ADDRESS

INSTALLER COMPANY NAME

BUILDER COMPANY NAME

INSTALLER SIGNATURE

DATE

Please retain the original version of this warranty for your records and mail, fax or email a copy to KNAUF PLASTERBOARD PTY LTD MARKETING DEPARTMENT
PO Box 483 Matraville NSW 2036, 02 9661 5500 or info@knaufplasterboard.com.au

October 2012





PRODUCT STEWARDSHIP AGREEMENT

In accordance with our Sustainability Policy, Knauf is committed to minimising the environmental impact of our products. This includes providing environmentally responsible disposal options for plasterboard waste from both construction and demolition sites.

Knauf will co-ordinate the collection of plasterboard waste for either recycling or reprocessing subject to the following conditions.

CONDITIONS:

1. Knauf reserves the right to charge a fee for the removal and processing of plasterboard waste;
2. Plasterboard waste will only be collected where a Knauf Product Stewardship Agreement has been signed by the beneficiary and the Knauf Sales and Marketing Director;
3. Notice must be provided in writing for any and all plasterboard collection with a notice period as follows:
 - a. 7 days for construction waste,
 - b. 90 days for demolition waste
4. Knauf accepts no liability for demolition within the structure nominated in the Product Stewardship Agreement;
5. All plasterboard to be collected must be disassembled and sorted into like material groups as directed by Knauf to facilitate their re-use, recycling or reprocessing:
 - Plasterboard waste must be left neatly stacked, or in bins or bags as directed, in an area at ground level which is reserved for plasterboard collection;
 - The plasterboard must be easily accessible for collection, that is no other building materials or obstacles in or around the collection area;
 - The plasterboard waste must be no larger than 3m x 2m and must be free of all contaminants such as plastics, screws, adhesive, cement, food scraps, toxic substances and other building materials;
 - Where plasterboard waste is stacked outside, it must be kept off the ground and covered with a larger piece of plasterboard to minimise the effects of rain;
 - If plasterboard waste is not in the allocated area, accessible, or does not comply with all of the stated conditions, the waste will not be collected. The beneficiary will be charged and a non-conformance notice will be issued detailing the reason for non-collection.

This Product Stewardship Agreement will only be valid if all the details below are completed.

Note: A document can be provided on request to the beneficiary detailing the weight of plasterboard collected for recycling or reprocessing.

BENEFICIARY

ABN

PHONE

PROJECT NAME AND ADDRESS

SIGNATURE OF BENEFICIARY

DATE

SIGNATURE OF KNAUF

DIRECTOR SALES AND MARKETING

DATE

Indoor Environment Quality



[Click to go to Acoustic Solutions](#)



INTERNAL NOISE LEVELS

Knauf products and systems can contribute to points under the Internal Noise Levels credit. Refer to the Knauf Technical Manual for full system details or knaufplasterboard.com.au. Below is a summary of points available for the Internal Noise Levels credit for each Green Star Rating Tool.

TABLE 4 Internal Noise Levels Credit Summary

Green Star Rating Tool	Credit No.	Points	Knauf Solution		
			Use Knauf Acoustic Systems to reduce the ambient internal noise levels	Reduce noise from building services by using Knauf Soil and Waste Pipe Systems	Use Knauf Designpanel and Cleano Systems to reduce reverberation time by absorbing noise
Education v1	IEQ-7	2	✓	✓	✓
Healthcare v1	IEQ-7	1	✓	✓	
Industrial v1	IEQ-7	2	✓	✓	✓
Multi Unit Residential v1	IEQ-7	2	✓	✓	
Office v3	IEQ-12	2	✓	✓	
Office As Built v2	IEQ-12	2	✓	✓	
Office Design v2	IEQ-12	2	✓	✓	
Office Interiors v1.1	IEQ-10	1	✓		✓
Retail Centre v1	IEQ-7	1		✓	
Public Building v1	IEQ-7	3	✓		✓



[Click to go to VOC Certificates](#)



VOLATILE ORGANIC COMPOUNDS

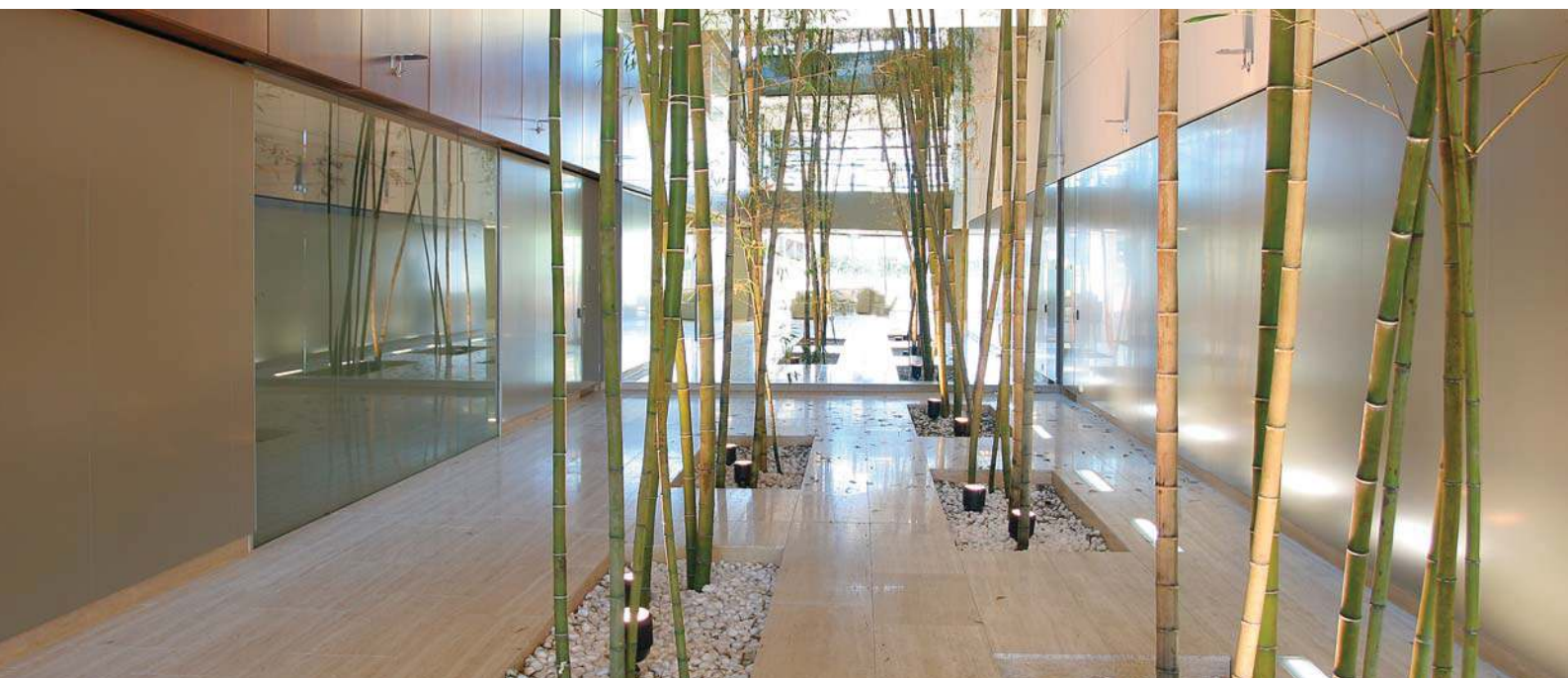
Knauf products are under the required levels for VOC content and therefore are awarded the maximum amount of points available. Below is a summary of points achieved for the Volatile Organic Compounds credit.

Knauf products certified by Global GreenTag meet the IEQ criteria for low VOC (refer to the specific GreenRate certificate). Click on the image to download Knauf's VOC Certificates from CETEC Pty Ltd.

TABLE 5 Volatile Organic Compounds Credit Summary

Green Star Rating Tool	Credit No.	Points	Category Description		
			Adhesives and Sealants	Tenancy Fitout Item – Walls and Partitions	Wall and Ceiling Finishes
Education v1	IEQ-8	2	✓	✓	
Healthcare v1	IEQ-8	2	✓		✓
Industrial v1	IEQ-8	1	✓		
Multi Unit Residential v1	IEQ-8	2	✓		✓
Office v3	IEQ-13	1	✓		
Office As Built v2	IEQ-13	1	✓		
Office Design v2	IEQ-13	1	✓		
Office Interiors v1.1	IEQ-11	4	✓	✓	
Retail Centre v1	IEQ-8	1	✓		
Public Building v1	IEQ-8	2	✓	✓	

Management



WASTE MANAGEMENT PLAN

Knauf can assist building contractors in implementing a Waste Management Plan by providing access to a plasterboard recycling service. Refer to the Product Stewardship Agreement for details.

100% of plasterboard waste can be diverted from landfill as long as it is disassembled and free from contaminants. The number of points awarded for this credit is dependent on the percentage (%) of total waste by weight which is re-used or recycled for the Green Star project.

TABLE 6 Waste Management Plan Summary

Green Star Rating Tool	Credit No.
Education v1	MAN-7
Healthcare v1	MAN-7
Industrial v1	MAN-7
Multi Unit Residential v1	MAN-7
Office v3	MAN-7
Office As Built v2	MAN-7
Office Design v2	MAN-7
Office Interiors v1.1	MAN-6
Retail Centre v1	MAN-7
Public Building v1	MAN-7

