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Certificate of Conformity

Certificate number: CM 30065 Rev 2

THIS TO CERTIFY THAT

Jet Stream® MAX Ceiling Insulation

Type and/or use of product:

Non-combustible thermal insulation for ceilings.

Description of product:

Loose-fill glass mineral wool insulation, blown into open ceiling spaces at a density of 8-9 kg/m².

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA (2016 +A1)

	Volume One		Volume Two	
Performance Requirement(s)	FP1.4	Weatherproofing	P2.2.2	Weatherproofing
	GP2.1	Combustion appliances	P2.3.1	Spread of fire
	GP5.1	Construction in bushfire prone areas – Design and construction	P2.3.3	Heating appliances
			P2.3.4	Buildings in bushfire areas
Deemed-to-Satisfy Provision(s):	A1.1	Definition – Non-combustible	1.1.1.2	Definition – Non-combustible
	C1.9	Non-combustible building elements	3.12.1.1	Building fabric thermal insulation
	C1.10	Fire hazard properties		

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In placing the **CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

Herve Michoux
Global-Mark Managing Director

Peter Gardner
Unrestricted Building Certifier

Date of issue: 26/04/2019

Date of expiry: 26/04/2022



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	J1.2	Thermal construction – general		
State or territory variation(s):	NSW GP5.1	Construction in bushfire prone areas	SA P2.3.1(a)(ii) & (iii)	Protection from the spread of fire
	Qld GP5.1	Construction in bushfire prone areas	Tas P2.3.4	Bushfire areas
	Tas GP5.1	Construction in bushfire prone areas	NSW Part 3.12	BASIX replaces national BCA provisions
	NSW J(A)1.2	BASIX replaces national BCA provisions		
	NT Section J	Replaced by BCA 2009 Section J		
	Qld Section J	Replaced by BCA 2009 Section J		
SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B				
Limitations and conditions: <ol style="list-style-type: none"> 1. Installation shall be carried out by a Knauf Insulation accredited installer installed in accordance with AS 3999:2015 and the relevant installation guide as specified in section A5. 2. Installation shall be carried out only after the building is waterproof, and after the materials within the building have dried to a sufficient degree that moisture is not transported into the insulation material. 3. The mass of the insulation in kg/m² evenly distributed across ceiling linings shall not exceed the ceiling lining manufacturer's maximum loading specifications. 				Building classification/s: Unrestricted

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Jet Stream® MAX Ceiling Insulation is a loose-fill thermal insulation that is blown into the open ceiling space of a pitched roof to provide an insulation layer on the top of the ceiling lining.

A2 Description of product

Jet Stream® MAX material is unbonded glasswool and is non-combustible. It is a bulk insulation that complies with AS/NZS 4859.1:2002 (incorporating Amendment No.1).

Jet Stream® MAX is supplied compressed in bags. It is installed by mechanical processing using a hopper and blower to distribute the expanded material via a delivery hose to the required depth in the ceiling.

Accessories include depth marking gauges, wind diverters and shielding.

A3 Product specification

Specification of Jet Stream® MAX Ceiling Insulation shall be in accordance with the following Knauf publications:

- Jet Stream® MAX – Ceiling Application Guidelines, August 2015, Ref.: KIAN0915233BR.
- Jet Stream® MAX – Blow-in Glasswool Ceiling Insulation Datasheet, June 2018, Ref.: KIAN0815220DS.

Also refer to Knauf Insulation Material Safety Datasheet – Glass Mineral Wool with ECOSE® Technology [October 2014].

Jet Stream® MAX Ceiling Insulation has a thermal conductivity of 0.051 W/mK at an average density of 8-9 kg/m³ and thermal resistance (R-value) as specified in Table 1, which contributes to the overall thermal resistance value (Total R-value) of roof and ceiling construction.

Table 1

Nominal Thickness (mm)	R-Value (m ² K/W)
50	1.0
75	1.5
100	2.0
125	2.5
160	3.0
180	3.5
205	4.0
255	5.0
310	6.0



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A4 Manufacturer and manufacturing plant(s)

- St Helens, PO Box 10, Stafford Road, Merseyside WA 10 3NS, UK

A5 Installation requirements

Installation shall be carried out by a Knauf Insulation accredited installer in accordance with Knauf Insulation Jet Stream MAX – Ceiling Application Guidelines, August 2015, Ref.: KIAN0915233BR.

The requirements of AS/NZS 4859.1:2002 (incorporating Amendment No.1) and AS 3999:2015 must be maintained.

Installation shall be carried out only after the building is weatherproof, and after the materials within the building have dried to a sufficient degree that moisture is not transported into the insulation material.

The insulation material must be isolated from recessed downlights in ceiling applications by methods as specified in AS 3999:2015, or by a barrier suitable for use with blow in glass fibre insulation that complies with AS/NZS 5110:2011 (incorporating Amendment No.1).

Shielding of electrical and telecommunication wiring; water, gas and other pipes; ducting; and any other features shall be carried out in accordance with AS 3999:2015.

Provide wind diverters in eaves and protect any other ventilation pathways by shielding to a height at least 130 mm above the intended depth of insulation. Also protect openings such as ceiling access hatches with shielding to a height at least 50 mm above the intended depth of insulation.

Installed insulation material shall have a nominal density of 8-9 kg/m³.

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendix A, A3 and Appendix A, A5.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with NCC 2016 (Incorporating Amendment No.1, 2018):

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
Volume One A1.1	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1 and 2
Volume One C1.9	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume One CP1.10	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume One FP1.4	Volume One A05(a)	Volume One A2.2(a)(vi) – Another form of documentary evidence	Item 10
Volume One GP2.1	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume One GP5.1	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume One J1.2	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 4, 5, 6, 7, 8 and 9
Volume Two 1.1.1.2	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(i) – Report issued by a registered testing authority	Items 1 and 2
Volume Two P2.2.2	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(vi) – Another form of documentary evidence	Item 10
Volume Two P2.3.1	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(i) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume Two P2.3.3	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(i) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume Two P2.3.4	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(i) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5 and 6
Volume Two 3.12.1.1	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(i) – Report issued by a registered testing authority	Items 4, 5, 6, 7, 8 and 9

B2 Reports

The following reports have been used as evidence to determine compliance with NCC 2016 (Incorporating Amendment No.1, 2018):

Ref	Author	Reference	Date	Description	NATA Registration
1	CSIRO Materials Science and Engineering	FNC10943	12/11/2013	AS 1530.1-1994 Methods for fire tests on building materials, components and structures, Part 1: Combustibility test for materials.	Accreditation No.165 Corporate Site No.3625
2	CSIRO Infrastructure Technologies	FCO-3073 Revision A	28/08/2014	Likely fire performance of Knauf Earthwool glass mineral wool insulation.	Accreditation No.165 Corporate Site No.3625
3	AWTA Product Testing	Test Number: 7-565160-CO	12/03/2009	AS/NZS 1530.3-1999 Simultaneous determination of Ignitability, Flame Propagation, Heat Release and Smoke Release Product tested – 50mm Earthwool insulation, 1670 g/m ² .	Accreditation Number 1356
4	R&D Services Inc	Report Number RD10308	10/05/2010	Properties and performance data for Knauf Insulation GmbH (Shelbyville) Jet Stream mineral fibre (fibreglass) insulation for attic applications.	ilac-MRA via. NVLAP Lab Code 200265-0

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Ref	Author	Reference	Date	Description	NATA Registration
5	R&D Services Inc	Report Number RD10544	30/09/2010	Properties and performance data for Knauf Insulation GmbH (Lanett) Jet Stream mineral fibre (fibreglass) insulation for attic applications. Tests performed according to CAN/ULC S702-09 "Standard for mineral fibre thermal insulation for buildings".	ilac-MRA via. NVLAP Lab Code 200265-0
6	Knauf Product Testing Laboratory	Report No. 0401	12/04/2004	Physical tests on Knauf Jet Stream Loose Fill Blowing Wool for ASTM C764 specification compliance: <ul style="list-style-type: none"> • ASTM C 1304-95 (R2001) Knauf PTL • ASTM C 1104/C 1104M-00 Knauf PTL • ASTM C 1338-00 SGS US Testing • ASTM E 136 Commercial Testing • ASTM E 970 Commercial Testing • ASTM C764-99 / ASTM C665 Knauf PTL 	Knauf PTL – ilac-MRA via. NVLAP# 100248-0 Commercial Testing Co. Inc. – ilac-MRA via. NVLAP# 10120-0
7	R&D Services Inc	–	9/02/2015	Determination of R-Values for Jet Stream Ultra fiber glass blowing insulation (product code 3619) manufactured by Knauf Insulation, GmbH at Shasta Lake, CA – January 2015.	ilac-MRA via. NVLAP Lab Code 200265-0
8	R&D Services Inc	–	10/03/2015	Determination of R-Values for Jet Stream Ultra fiber glass blowing insulation (product code 3619) manufactured by Knauf Insulation, GmbH at Shasta Lake, CA – February 2015.	ilac-MRA via. NVLAP Lab Code 200265-0
9	R&D Services Inc	–	17/04/2015	Determination of R-Values for Jet Stream Ultra fiber glass blowing insulation (product code 3619) manufactured by Knauf Insulation, GmbH at Shasta Lake, CA – April 2015.	ilac-MRA via. NVLAP Lab Code 200265-0
10	Standards Australia	AS 3999:2015	2015	Bulk thermal insulation – Installation	Not applicable