Certificate of Conformity

Global-Mark Pty Ltd, Suite 4.07, 32 Delhi Road, North Ryde NSW 2113, Australia

Tel: +61 (0)2 9886 0222 - www.Global-Mark.com.au

Certificate Holder:
Knauf Insulation Pty Ltd
Unit 2
44 Borthwick Avenue
Murarrie, QLD, 4172

Tel: +61 7 3393 7300

Website:
www.knaufinsulation.com.au

Certificate number: CM 30066 Rev 2

THIS TO CERTIFY THAT

Jet Stream® MAX and Supafil Cavity Insulation

Type and/or use of product:	**Description of product:**
Non-combustible thermal insulation for walls, floors and skillion roofs when installed in the cavities between framing members in new buildings.	Loose-fill glass mineral wool insulation, blown into wall, floor and skillion roof cavities to a nominal density of 25-28 kg/m^2.

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
	FP1.5	Rising damp	**P2.2.3**	Rising damp
	FP5.2	Sound transmission and insulation – walls	**P2.3.1**	Spread of fire
	FP5.5	Sound transmission and insulation – walls in aged care buildings	**P2.3.3**	Heating appliances
	GP2.1	Combustion appliances	**P2.3.4**	Buildings in bushfire areas
	GP5.1	Construction in bushfire prone areas – Design and construction	**P2.4.6**	Sound insulation

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

Certificate of Conformity

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		
	J1.2	Thermal construction – general		
State or territory variation(s):	**SA FP1.5**	Moisture from ground	**NSW P2.2.3**	Dampness
	NT Part F5	Sound transmission and insulation	**SA P2.2.3**	Dampness
	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	**NT P2.4.6**	Sound insulation
	NSW J(A)1.2	BASIX replaces national BCA provisions	**NSW Part 3.12**	BASIX replaces national BCA provisions
	NT Section J	Replaced by BCA 2009 Section J	**NT Part 3.12**	Replaced by BCA 2009 Part 3.12
	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:

1. The building envelope shall comply with the Damp and Weatherproofing requirements of the BCA.
2. The addition of the product to cavities will not diminish the performance of the building element under fire.
3. The product is capable of withstanding temperatures associated with heating and combustion appliances that comply with AS/NZS 2918:2001.
4. When installed in accordance with section A5, the addition of the product to external wall and skillion roof cavities does not cause the penetration of water through the building envelope.
5. When installed in accordance with section A5, the addition of the product to sub-floor and external wall cavities does not facilitate the rise of moisture from the ground.
6. Contributes to a building element's compliance with sound insulation requirements when installed to a density greater than those specified for glasswool insulation in Volume One Specification F5.2 and Volume Two 3.8.6.3 in acceptable forms of construction for sound insulation of walls, floors and ceilings.
7. Installation shall be carried out by a Knauf Insulation accredited installed in accordance with AS 3999:2015 and the relevant installation guide as specified in section A5.
8. 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.
9. The mass of the insulation in kg/m^2 evenly distributed across ceiling linings shall not exceed the ceiling lining

Building classification/s:

Unrestricted

manufacturer's maximum loading specifications.	

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Jet Stream® MAX and Supafil Cavity Insulation are loose-fill thermal insulation products that are blown into the cavities between framing members in wall, skillion roof and floor construction.

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). Supafil differs only by the addition of a light silicone coating to the fibres for improved durability in areas where moisture could be present.

Jet Stream® MAX and Supafil are supplied compressed in bags and is installed by mechanical processing using a hopper and blower to distribute the expanded material via a delivery hose to each cavity in the building element being insulated.

Accessories include Blow-in-Blanket which is fixed to the open face of the framing members to contain the blown-in insulating material prior to fixing off the lining.

A3 Product specification

Specification of the product shall be in accordance with the following Knauf publications:

- Application Guidelines – Walls, Floors and Skillion Roofs, December 2015, Ref.: KIAN0815225BR.
- Supafil – Blow-in Glasswool Insulation Datasheet, December 2015, Ref.: KIAN1215315DS.
- Jet Stream MAX – Blow-in Glasswool Insulation Datasheet, June 2018, Ref.: KIAN0814093DS.

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

Supafil must be specified in sub-floor insulation. Jet Stream® MAX is suitable for all other applications in new construction: external walls, internal walls, mid-level floors and skillion roofs.

In walls, Jet Stream® MAX and Supafil Cavity Insulation have a thermal conductivity of 0.0387 W/mK at a minimum density of 25 kg/m^3 and thermal resistance (R-value) as specified in Table 1, which contributes to the overall thermal resistance value (Total R-value) of the wall construction element.

Table 1 – Walls

Nominal Thickness (mm)	R-Value (m^{2}K/W)
70	1.8
75	1.9
90	2.3
140	3.6

In skillion roofs and floors, Jet Stream® MAX and Supafil Cavity Insulation have a thermal conductivity of 0.039 W/mK at a minimum density of 25 kg/m^3 and thermal resistance (R-value) as specified in Table 2, which contributes to the overall thermal resistance value (Total R-value) of the skillion roof and floor construction elements.

Table 2 – Skillion Roofs and Floors

Nominal Thickness (mm)	R-Value (m^{2}K/W)
50	1.2
90	2.3
100	2.5
140	3.5
190	4.8
240	6.1

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 Application Guidelines – Walls, Floors and Skillion Roofs, December 2015, Ref.: KIAN0815225BR.

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.

Cavities into which the material is blown shall be backed by a rigid substrate material. In skillion roof applications, an air gap of at least 25 mm must be provided between the roof sarking and the rigid substrate. The unlined internal face shall be covered by a Blow in Blanket (BIB) fabric system stapled or adhered to the structural members that are spaced at maximum 600 mm centres. Linings shall be installed by mechanical fixing over the BIB once the cavities are filled. Underfloor applications must be finished by installing a rigid lining over the BIB. If adhesive fixing of the lining is specified, provide battens between the structural members and the lining.

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.

Installed insulation material shall have a minimum density of 25-28 kg/m^3.

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, 2 and 10
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, 6 and 10
Volume One C1.10	Volume One A05(a)	Volume One A2.2(a)(iv) – Report issued by a registered testing authority	Items 1, 2, 3, 4, 5, 6 and 10
Volume One FP1.4	Volume One A05(a)	Volume One A2.2(a)(vi) – Another form of documentary evidence	Item 13
Volume One FP1.5	Volume One A05(a)	Volume One A2.2(a)(vi) – Another form of documentary evidence	Item 13
	Volume One A05(d)	Comparison with the Deemed-to-Satisfy Provisions – installation is above a DPC	Item 12
Volume One FP5.2	Volume One A05(d)	Comparison with the Deemed-to-Satisfy Provisions – installation to a density greater than that specified for glasswool insulation in Specification F5.2	Items 11 and 12
Volume One FP5.5	Volume One A05(d)	Comparison with the Deemed-to-Satisfy Provisions – installation to a density greater than that specified for glasswool insulation in Specification F5.2	Items 11 and 12
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, 6 and 10
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, 6 and 10
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, 2 and 10
Volume Two P2.2.2	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(vi) – Another form of documentary evidence	Item 13
Volume Two P2.2.3	Volume Two 1.0.5(a)	Volume Two 1.2.2(a)(vi) – Another form of documentary evidence	Item 13
	Volume Two 1.0.5(d)	Comparison with the Deemed-to-Satisfy Provisions – installation is above a DPC	Item 12
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, 6 and 10
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, 6 and 10
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, 6 and 10
Volume Two P2.4.6	Volume Two 1.0.5(d)	Comparison with the Deemed-to-Satisfy Provisions – installation to a density greater than that specified for glasswool insulation in 3.8.6.3	Items 11 and 12
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):

Certificate of Conformity

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
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: • 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	BRANZ	Test Report DI0457/DU01	17/04/2014	Thermal resistance of an insulation sample Supafil Carbonplus.	ilac-MRA via. IANZ Accreditation Number 37
8	R&D Services Inc	RD11167	4/02/2011	Wall coverage and density determination of Knauf (Shasta Lake, CA) insulation "Jet Stream MAX BIBS Insulation" loose-fill mineral fibre insulation installed in wall cavities behind netting. Testing was done for CCMC evaluation purposes.	ilac-MRA via. NVLAP Lab Code 200265-0
9	BRANZ	Appraisal Number 858	30/04/2014	Technical assessment of products for building and construction – Jet Stream® MAX Blown Insulation.	ilac-MRA via. IANZ Accreditation Number 37
10	Exova	Document Reference N964364C	1/11/2013	Determination of Organic Matter in Thermal Insulation Material in Accordance with BS EN 13820-2003	ilac-MRA via. UKAS Accreditation Number 0249
11	Knauf Insulation Pty Ltd	KIAN0814093DS	June 2018	Jet Stream® MAX (Walls, Fllors and Skillion Roofs) Datasheet	Not applicable
12	Knauf Insulation Pty Ltd	KIAN0815225BR	Dec. 2015	Application Guidelines – Walls, Floors and Skillion Roofs	Not applicable
13	Standards Australia	AS 3999:2015	2015	Bulk thermal insulation – Installation	Not applicable