

TECHNICAL DATA SHEET

FI32 SEMI-RIGID INSULATION

Product description and typical applications

FI32 Semi-Rigid Insulation is available in glasswool rolls or sheets making it suitable for a large range of industrial and commercial insulation applications. Its excellent thermal and acoustic properties make it ideal for lining sheet metal ductwork. Other recommended uses for FI32 Semi-Rigid Insulation include storage tanks, process vessels, appliance cabinets, electrostatic precipitators, plant rooms and in the manufacture of acoustic baffles. The product can accommodate both flat and curved surfaces. FI32 Semi-Rigid Insulation is also ideal for use in curtain walling and spandrel panels.

A number of facing options can be applied to unfaced FI32 Semi-Rigid Insulation making it ideal for a broader range of applications.

Sisalation® Heavy Duty Perforated (HDP) Foil Facing provides long term durability of duct lining. This facing option delivers great acoustic performance and is commonly used in standard air-conditioning ducts in general commercial and residential applications.

Black Matt Facing is generally used to line cushion boxes. This facing option provides great acoustic benefits particularly in applications where a significant change in air direction occurs.

Vapastop® 883 Aluminium Foil Tri-Laminate (AFT) Facing is typically applied in applications where a vapour barrier is required. This facing option provides ease of cleanability.

Physical characteristics

Material R-value m ² K/W	Nominal thickness mm	Sheet dimensions mm	Roll dimensions mm	Density kg/m ³	Mass/unit area kg/m ²
R0.4	13	2400 x 1200	-	32	0.4
		2400 x 1500	-		
R0.8	25	2400 x 1200	15000 x 1200	32	0.8
		2400 x 1500	15000 x 1500		
R1.2	38	2400 x 1200	10000 x 1500	32	1.2
		2400 x 1500	8000 x 1500		
R1.5	50	2400 x 1200	7500 x 1200	32	1.6
		2400 x 1500	8000 x 1500		
R2.0	66	2400 x 1200	8000 x 1200	32	2.0
		2400 x 1500	6500 x 1500		
R2.3	75	2400 x 1200	7500 x 1200	32	2.4
		2400 x 1500	8000 x 1380		
R3.0	100	2400 x 1200	5000 x 1500	32	3.2
		2400 x 1500	-		

Note: Not all sizes may be held in stock. Contact Fletcher Insulation for further details.



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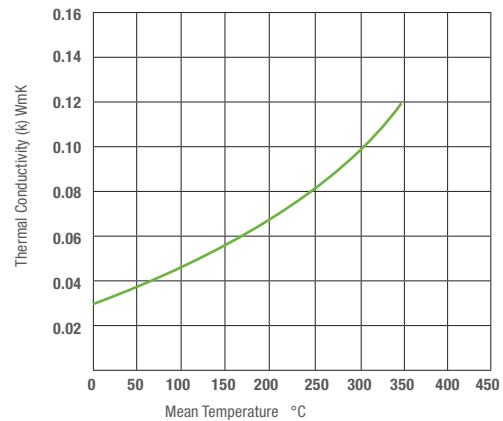
Thermal conductivity

The Material R-value of FI32 Semi-Rigid Insulation is determined in accordance with AS/NZS 4859.1. The thermal conductivity of FI32 Semi-Rigid Insulation at a mean temperature* of 23°C is 0.033 (at 20°C it is 0.032 W/mK) when tested in accordance with ASTM C177. Values of thermal conductivity may be obtained from the adjacent graph.

$$*\text{Mean Temperature} = \frac{T1 + T2}{2}$$

Where T1 = temperature of hot side of insulation (°C)

Where T2 = temperature of cool side of insulation (°C)



Maximum service temperature

The maximum service temperature for FI32 Semi-Rigid Insulation is 340°C. Where facings are applied, the temperature tolerance of the facing adhesive limits the surface temperature to 70°C.

Green Star compliant

Fletcher Insulation avoids the use of Ozone Depleting Potential (ODP) substances in the manufacture or composition of its FBS-1 Glasswool Bio-Soluble Insulation® and Sisalation® reflective foil products.

The use of Fletcher Insulation™ products guarantees the use of Zero ODP insulation while also ensuring that no harmful levels of Volatile Organic Compounds (VOC's) are released. This allows the incorporation of environmentally preferable insulation whilst also maintaining indoor air quality.

AS1530.3 Early fire hazard properties of materials

FI32 Semi-Rigid Insulation exhibits the following characteristics when tested in accordance with AS1530.3-1999:

	Plain	Black Matt Tissue Facing	Sisalation® Heavy Duty Foil Facing	Vapastop® 883 Foil Facing	AcoustiFORT™ Weave Facing
Ignitability Index	0	0	0	0	0
Spread of Flame Index	0	0	0	0	0
Heat Evolved Index	0	0	0	0	0
Smoke Developed Index	0-1	2	3	0-1	2

Moisture absorption

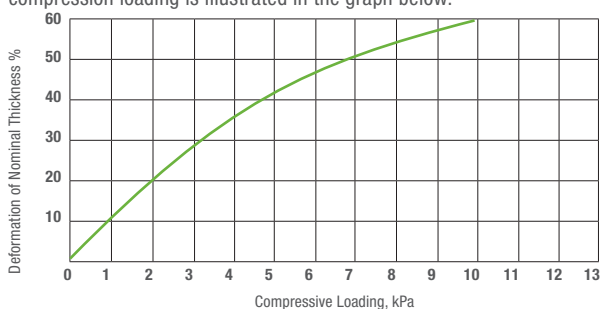
In the event of FI32 Semi-Rigid Insulation becoming wet, the insulation should be dried prior to installation to obtain maximum performance and prevent damage to other building elements. FI32 Semi-Rigid Insulation absorbs less than 0.2% moisture by volume when exposed to environmental conditions of 50°C and 95% relative humidity for four days.

Alkalinity

When tested in accordance with British Standard 3958, Fletcher Insulation™ glasswool insulation products receive a rating of pH9 (pH7 is neutral). The insulation will not promote or accelerate the corrosion of steel or galvanised steel studs provided the insulation is protected from external contamination.

Compressive strength

FI32 Semi-Rigid Insulation has excellent compressive strength and resilience and recovers to its nominal thickness after compression. Deformation under compression loading is illustrated in the graph below.



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Acoustic performance

FI32 Semi-Rigid Insulation achieves the following sound absorption coefficients when tested in accordance with AS ISO 354 - 2006:

Nominal thickness	Facing type	Sound absorption coefficients (reverberation) at frequencies (Hz) of:					
		125	250	500	1000	2000	NRC
38	Nil	0.12	0.43	0.90	1.06	0.99	0.85
50	Nil	0.19	0.68	1.09	1.16	1.02	1.00
75	Nil	0.29	1.08	1.23	1.03	0.99	1.10
100	Nil	0.50	1.26	1.21	1.08	1.03	1.15
50	HD Perf.	0.19	0.68	1.07	1.05	1.01	0.95

Specification notes

State the following:

The insulation material shall be Fletcher Insulation FI32 Semi-Rigid Insulation R _____ m² K/W _____ x _____ x _____ mm (specify Material R-value, width, length, thickness) as manufactured by Fletcher Insulation.

Where a facing is to be applied to the glasswool substrate, please specify the facing required.

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