

FI22 Ductwrap

External ductwork insulation blanket

Description

FI22 Ductwrap Insulation is manufactured from 80% recycled glass using a thermoset resin producing fine non-combustible fibers and forming into an insulation blanket and supplied in rolls. Sisalation® Heavy Duty Facing Foil is applied to one side for condensation management. The Glasswool blanket component of FI22 Ductwrap is made from 22kg density, flexible and resilient glasswool, which is specifically designed to provide exceptional acoustic insulation performance. The Glasswool blanket is flexible enough to wrap around angles and small radii enabling it to maintain exceptional compressive strength whilst maintaining its thickness.

Application

FI22 Ductwrap is a flexible insulation blanket designed for external lagging of sheetmetal ductwork in the heating ventilation and cooling (HVAC) segment. Typically suited for use as external insulation for air-conditioning ductwork. Available in a range of thicknesses that are well suited to the following sectors:

- Retail
- Health
- Hospitality
- Multi-residential high rise
- Commercial office spaces

Product limitations of use:

- Modifications not permissible, as suitability and/or compliance may be compromised
- Not to be used/exposed to weather in any condition including prior, during and after installation.
- This product is not designed for use as a wall wrap or roof sarking.
- Unfaced Glasswool is not a water or vapour barrier, cannot be used where a water or vapour control is required.
- This product does not have a group number in accordance with AS 5637.1 and is not suitable as an exposed internal wall or ceiling lining.
- This product does not meet the fusion temperature and non-combustibility requirements of AS 1668.1 Clause 2.3.2.
- The foil facing product should not come into contact with wet concrete, or alkaline materials.

Features and benefits

Available in a range of thicknesses	→	To meet the performance requirements as set out by the NCC.
Lightweight	→	Easy to handle and makes easy to form the shape of the duct being insulated.
Offers acoustic sound absorption properties	→	Greatly reduces fan noise within the duct.

Product data

Facing type	Material R-value m ² K/W	Thickness mm	Width mm	Length mm	Density kg/m ³	Pack weight kg	Coverage m ² per roll	Product code
Sisalation® Heavy Duty Facing Foil (1200mm wide to cover the width of the insulation blanket).	R0.7	25	1200	15	22	9.9	18	4007051
	R0.7	25	1500	15	22	12.37	22.5	4005660
	R1.1	38	1200	15	22	15.04	18	4004870
	R1.1	38	1200	10	22	10.03	12	4007052
	R1.1	38	1500	15	22	18.81	22.5	4004869
	R1.2	41	1200	10	22	10.82	12	4005652
	R1.2	41	1200	18	22	19.48	21.6	4005649
	R1.5	50	1200	10	22	13.2	12	4003809
	R1.5	50	1200	15	22	19.8	18	4007050
	R1.5	50	1500	12	22	19.8	18	4005661
	R2.0	75	1200	7.5	22	14.85	9	4005416
	R2.0	75	1500	7.5	22	18.56	11.25	4007048

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

Physical properties

Property	Test method/standard	Result	Unit
Nominal density	ASTM C167	22	kg/m ³
Thermal resistance @ 23°C	AS/NZS 4859.1	Complies	m ² K/W
Maximum service temperature	ASTM C411/C447	Glasswool: 300 Facing Materials: 70	°C
Fungi resistance of insulation materials	ASTM C1338-14	Pass (no growth)	
Moisture absorption	When exposed to environmental conditions of 50°C and 95% relative humidity for four days	<0.2	% by volume

Fire hazard properties

FI22 Ductwrap exhibits the following characteristics when tested in accordance with the following standards:

Property	Test method/standard	Result
Early Fire Hazard Indices	AS/NZS 1530.3	
Ignitability Index		0
Spread of Flame Index		0
Heat Evolved Index		0
Smoke Developed Index		2
Burning test	UL181.11	FI22 Ductwrap Insulation has undergone testing to provide an indication of how it will perform individually when tested to UL 181 Burn Test, this testing is indicative only. AS 4254.1 and AS 4254.2 requires specific testing on the final assembled duct system for compliance.

Compliance

When correctly specified and installed, the product complies or assists to comply with below NCC clauses and relevant standards:

NCC 2019

- Complies with AS/NZS 4859.1 as referenced in NCC 2019, Volume 1 Clause J1.2(a) and NCC 2019, Volume 2 Clause 3.12.1.
- When tested to AS/NZS 1530.3 this product does not exceed the 'Spread of Flame' or 'Smoke Developed' indices as required by NCC 2019 Volume 1, Specification C1.10 Clause 5 for Air-handling ductwork and Clause 7 for insulation materials.

NCC 2022

- Complies with AS/NZS 4859.1 as referenced in NCC 2022, Volume 1 Clause J4D3(1) and NCC 2022, Volume 2 Housing Provisions Clause 13.2.2(1).
- When tested to AS/NZS 1530.3 this product does not exceed the 'Spread of Flame' or 'Smoke Developed' indices as required by NCC 2022 Volume 1, Specification 7 'Fire Hazard Properties S7C5 for Air-handling ductwork and Table S7C7 for insulation materials.

Acoustic performance

Sound absorption

The performance of sound absorption for insulation is described by the Noise Reduction Coefficient (NRC) or Weighted Sound Absorption Coefficient. In sound absorption applications, the NRC is used as an acoustic performance measure. The higher the NRC, the greater the sound absorption at the representative frequencies. The NRC is the calculated average result of four frequencies: 250 Hz, 500 Hz, 1,000 Hz and 2,000 Hz. Ductwrap achieves the following sound absorption coefficients when tested in accordance with AS ISO 354-2006:

Product	Thickness mm	Sound absorption coefficients at frequencies (Hz) of:									NRC	α _w
		100	125	250	500	1000	2000	3150	4000	5000		
FI22 Ductwrap faced with Sisalation® Heavy Duty Facing Foil	50	0.33	0.34	1.02	1.06	0.65	0.37	0.25	0.17	0.14	0.80	0.35 (LM)

Health and safety

Ductwrap is manufactured from FBS-1 Glasswool Bio-Soluble Insulation®. Refer to Fletcher Insulation Glasswool SUIS for more information.

Environmental properties

FI22 Ductwrap Glasswool Insulation is manufactured from up to 80% recycled glass which would otherwise go into landfill and be unsuitable for alternative manufacturing processes.

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

The use of FI22 Ductwrap insulation provides the use of Zero ODP insulation while also ensuring that no harmful levels of Volatile Organic Compounds (VOCs) are released. This allows the incorporation of environmentally preferable insulation whilst also maintaining indoor air quality.

Maintenance and conditions of use

- For installation please refer to AS4254.2 for installation requirement for air handling ductwork.
- Product should be kept dry, not to be exposed to weather in any condition including prior, during and after installation.
- Foil facing should not be in contact with any corrosive environments, water or alkaline materials such as wet concrete etc.
- Use of pressure cleaners or mineral based cleaners must not be used on the facing product.
- Where insulation can be inspected, ensure any tears in the facing are repaired with appropriate tape as highlighted in the AS4254.2 for installation requirement for air handling ductwork.

Technical specification

When specifying, please state the following:

The insulation material shall be FI22 Ductwrap with of nominal thickness of _____mm (specify nominal thickness) faced with Sisalation® Heavy Duty Facing Foil and with a Material R-value of R _____m²K/W (specify Material R-value).

The following performance attributes must be specified:

Product must be FBS-1 Biosoluble.

Product must recover to the requirements of AS/NZS 4859.1.

Where sound performance is required for the project, Sound Absorption level shall be _____.

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