

TECHNICAL DATA SHEET

FI22 FLEXIBLE DUCTLINER INSULATION BLANKET FOR MECHANICAL SERVICES



Product description and typical applications

Flexible Ductliner has an ideal combination of properties making it suitable for use with automated sheet metal cutting and duct making machinery. It has the high resiliency of a board, while retaining enough flexibility to be used in roll form. When used in this form, a continuous length of Flexible Ductliner has the benefits of:

- (a) reducing wastage and;
- (b) enabling insulation of L-shaped sections by folding through 90° without cutting.

Fabricated Flexible Ductliner is primarily used to prevent surface fibre erosion and should be specified where air velocities exceed 6 metres/sec. Flexible Ductliner may be fabricated using one of the following options:

Black Tissue - used for the purpose stated above with the added advantage of concealing the insulation surface behind grilles, diffusers and openings.

Sisalation® HD Perforated - recommended for use where air velocities exceed 10 metres/sec.

Vapastop® - recommended for use where a vapour barrier is desired.



Physical characteristics

Material R-value m ² K/W	Nominal thickness mm	Roll dimensions	Density kg/m ³	Mass/unit area kg/m ²
R0.7	25	1200mm x 15m	22	0.6
R1.0	38	1200mm x 15m	22	0.8
R1.5	50	1200mm x 18m	22	1.1

Note: standard facing material is Sisalation® Heavy Duty (450).



Thermal performance

Flexible Ductliner complies with the requirements of AS/NZS 4859.1:2002 including Amendment 1.



Early fire hazard properties

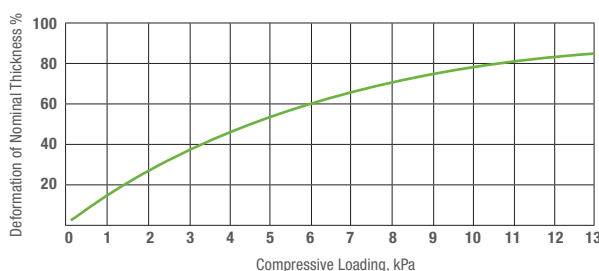
Flexible Ductliner achieves the following results when tested in accordance with AS1530.3-1999:

	Unfaced	Faced with Black Tissue	Faced with Sisalation® HD Foil
Ignitability Index	0	0	0
Spread of Flame Index	0	0	0
Heat Evolved Index	0	0	0
Smoke Developed Index	0-1	2	2



Compressive strength

Flexible Ductliner has excellent compressive strength and resilience to allow for full recovery following compression. Deformation under compression loading is illustrated in the graph below:



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Acoustic performance

Flexible Ductliner achieves the following sound absorption coefficients when tested in accordance with AS ISO 354 - 2006:

	Nominal thickness mm	Sound absorption coefficients (reverberation) at frequencies (Hz) of:					
		125	250	500	1000	2000	NRC
Black Tissue	38	0.09	0.28	0.60	0.77	0.90	0.65
Sisalation® HD Perforated	50	0.12	0.27	0.63	0.89	1.05	0.70

Maximum service temperature

The maximum and minimum service temperature of Flexible Ductliner ranges from sub zero to a maximum of 340°C. Where a facing is applied to the glasswool insulation, the surface temperature of Flexible Ductliner should not exceed 70°C.

Moisture absorption

Flexible Ductliner 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 products receive a rating of pH9 (pH7 is neutral). They will not promote or accelerate the corrosion of steel or galvanised steel studs provided they are protected from external contamination.

Safe to use

Flexible Ductliner is manufactured from FBS-1 Glasswool Bio-Soluble Insulation®. FBS-1 Glasswool Bio-Soluble Insulation® is safe to use and meets the criteria of the Australian Safety and Compensation Council (formerly NOHSC) to be classified as non-hazardous. Fletcher Insulation™ glasswool can be used with confidence in any residential, commercial or industrial application.

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 Flexible Ductliner 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.

Recommended velocities in air-conditioning ducts

Flexible Ductliner has been tested for fibre erosion in accordance with Underwriters Laboratories Standard UL181 - 1972, Section 15 'Standard for Safety - Air Ducts'. Black Tissue and Perforated Foil Faced Flexible Ductliner has been subjected to velocities of 25 metres/sec, and with a safety factor of 0.4 applied (in accordance with the above standard), results in a safe working velocity of 10 metres/sec. For higher velocity air flows, unfaced or Black Tissue Faced Flexible Ductliner should be used behind perforated metal mechanically fastened to the duct wall.

Specification notes

The insulation material shall be Fletcher Insulation Flexible Ductliner with a Material R-value of R _____ m² K/W (specify Material R-value) at a nominal thickness of _____ mm (specify nominal thickness).

The insulation shall be faced with _____ (specify one of the three facing options available).

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