Fletcher Insulation
Building Better, Together

Technical Data Sheet

SISALATION®

VAPASTOP® 883 FACING FOIL

Description

Sisalation® Vapastop® 883 Facing Foil is a flexible tough lightweight vapour barrier material consisting of bright aluminium foil extrusion laminated to a strong polyethylene reinforced fabric.
FACE 1: Polyethylene reinforcing mesh
FACE 2: Bright aluminium foil

Applications

Vapastop® 883 Facing Foil is used in the fabrication of air conditioning ductwork as an internal liner where high tear strength and puncture resistance are required in addition to a high degree of flexibility without delamination of the aluminium foil. The aluminium foil has a very low permeance to water vapour and other gases, which makes Vapastop® 883 ideal for air handling ductwork.
Vapastop® 883 is a strong and durable vapour barrier that helps prevent fibre erosion of internally lined HVAC ductwork insulation, which otherwise can lead to fibres entering the air-stream of the HVAC system.
Vapastop® facing provides excellent acoustic absorption without the need for perforation when applied to glass wool insulation blanket and boards. The sealed, nonperforated surface of Vapastop® 883 provides a superior alternative to the combined facing option of HDP (perforated foil) and Mylar/Melinax film, however still offering exceptional sound absorption performance.

Product Data

Available as a facing option on both FI32 Semi Rigid Insulation in various thicknesses and sizes. Vapastop® 883 is also available in rolls as facing foil on its own. Please check with your Fletcher Insulation Representative for full range and availability.

Physical Properties

Property	Test Method	Result	Unit
Nominal thickness		0.2	mm
Nominal grammage		66.7	g/m²
Vapour barrier (WVTR)	ASTM E96-2012	Class 1	ug/N.s
Resistance to dry lamination	AS/NZS 4201.1	Pass	
Resistance to wet lamination	AS/NZS 4201.2	Pass	
Shrinkage	AS/NZS 4201.3	Pass (< 0.5%)	
Resistance to water penetration water barrier	AS/NZS 4201.4	Pass	
Surface water absorption	AS/NZS 4201.6	Low (55.5)	
Edge tear resistance	TAPPI T470	Machine Direction: 221 Lateral Direction: 190	N
Folding endurance	AS1301.423	Pass > 2.0 in Machine Direction > 1.7 in Lateral Direction	
Safe working air velocity/erosion test	UL181 part 18	16	m/s

Early Fire Hazard Properties

FI32 Semi-Rigid Insulation faced with Vapastop® 883 exhibits the following characteristics when tested in accordance with the following standards:

Test Method/Standard		Vapastop® 883
Ignitability, Flame Propagation, Heat Release and Smoke Release (AS/NZS 1530.3: 1999)	Ignitabiity Index Spread of Flame Index Heat Evolved Index Smoke Developed Index	0 0 0 2
UL181.11 Burning Test (AS 4254:2002)		Complies

Health and Safety

There are no known health or safety risks associated with this product for applications described in this datasheet. Sisalation® Vapastop® 883 Facing Foil contains aluminium foil and can conduct electricity. To avoid electrocution, care should be taken to ensure products do not come into contact with electrical wiring during installation or use. For additional information or to request a Material Safety Data Sheet please visit www.insulation.com.au or contact your Fletcher Insulation Representative.

Acoustic Performance

Sound Absorption

The performance of sound absorption for insulation is described by the Noise Reduction Efficient (NRC). 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. Vapastop 883 Facing Foil bonded directly to FI32 Semi-Rigid Insulation achieves the following sound absorption coefficients when tested in accordance with AS ISO 354 – 2006:

FI32 Semi Rigid Faced with:	Nominal thickness mm	Sound Absorption Coefficients at frequencies (Hz) of:										
		100	125	250	500	1000	2000	3150	4000	5000	NRC	α_w
Vapastop® 883	25	0.08	0.11	0.42	0.81	1.06	0.87	0.59	0.46	0.40	0.80	0.65 (M)
Vapastop® 883	38	0.09	0.19	0.77	1.02	1.09	0.78	0.57	0.51	0.41	0.90	0.70 (LM)
Vapastop® 883	50	0.15	0.30	0.90	1.06	1.03	0.77	0.60	0.52	0.37	0.95	0.70 (LM)
Vapastop® 883	75	0.28	0.59	1.17	0.97	0.94	0.83	0.64	0.54	0.41	1.00	0.75 (LM)
Vapastop® 883	100	0.44	0.85	1.15	1.03	0.91	0.78	0.56	0.47	0.36	0.95	0.65 (LM)

Recommended Air Velocities for Duct Linings

The recommended maximum design velocities for duct linings has been determined for FI32 Semi Rigid Insulation faced with Sisalation® Vapastop® 883 by testing in accordance with the requirements of UL181–US Standard for Safety for Factory-Made Air Ducts and Connectors (UL, 2013) Clause 18 at velocities of up to 40m/s, with a with a safety factor of 0.4 applied (in accordance with the above UL181 standard), **results in a safe working velocity of 16m/sec.** In applications where ductwork is operating at higher air flow velocities or where alternate duct linings are applied, it is recommended the insulation be applied behind perforated metal and mechanically fastened to the duct wall.Maximum design velocities are valid for ductliner insulation faced by Fletcher Insulation and installed according to AS4254.2.

Technical Specifications

When specifying, state the following:
Facing material should be Fletcher Insulation Vapastop® 883 Foil bonded directly to FI32 semi Rigid Insulation.