

THERMOBREAK[®] LS-F

Thermal Insulation



Heavily reinforced foil facing to protect pipework, ducts and plant room equipment.

SEKISUI

FOAM
INTERNATIONAL
Global Foam Solutions

PHYSICALLY
CROSSLINKED
SEKISUI TECHNOLOGY



Setting the Standard in Polyolefin Insulation



Thermobreak® is the leading and most innovative polyolefin foam thermal insulation available to the HVAC and Building industry worldwide. Thermobreak's® performance is unsurpassed.

Developed in Australia over 30 years ago, Thermobreak® is manufactured using our proprietary physically crosslinked closed cell polyolefin foam technology, invented and commercialised by the Sekisui Chemical group in Japan. Laminated with reinforced foil and adhesive backing, Thermobreak® is widely recognised as the global leader in polyolefin insulation.

Thermobreak insulation is manufactured to ASTM C1427 Standard.

Superior Fire & Smoke Performance

Third Party Certifications

Thermobreak® LS-F offers the same thermal performance and properties as our standard product with the added benefit of third party certifications including Factory Mutual (FM) and TUV-PSB.

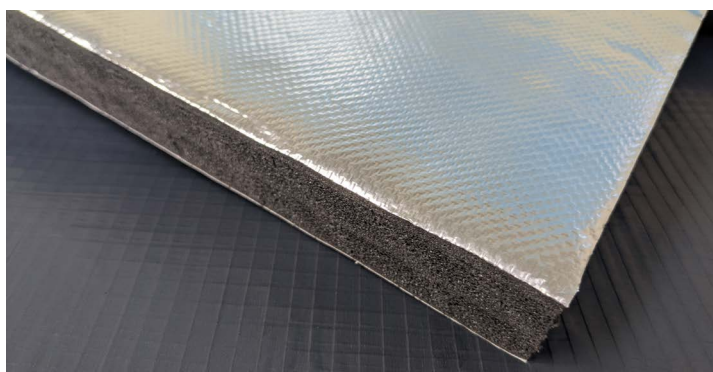
FM 4924 is widely regarded as the most severe and realistic fire test for duct and pipe insulation.

Thermobreak® is currently the only polyolefin based product to have FM approval to FM 4924 Pipe insulation.



Regulations and Compliancy

- > UAE Civil Defence Certificate of Compliancy
- > DCL Product Conformity
- > CE Certification

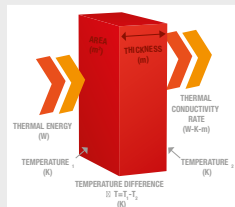


Engineered to Perform

Market leading performance

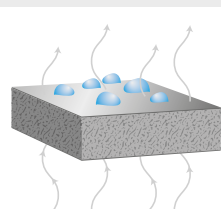
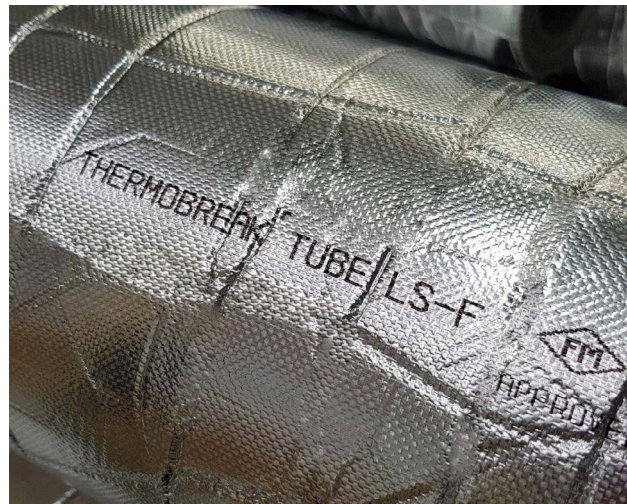
Our unique physically crosslinked technology results in a smaller and more evenly distributed cell structure. Cell structure directly affects thermal conductivity and vapour permeability. Both are key factors in insulation performance.

Thermobreak®'s thermal performance remains relatively unchanged over a 10 year period.



Thermal Conductivity:

0.032 W/mK (23°C) is the lowest of any flexible insulation material. On equivalent thickness basis, **Thermobreak®** provides up to 18% better insulation than elastomeric and chemically crosslinked foams.

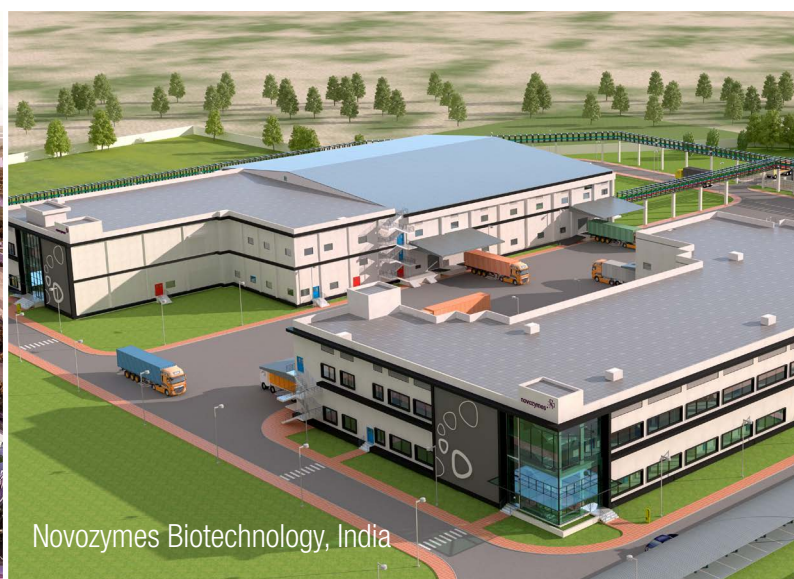


Vapour Permeability of almost zero ensures our thermal conductivity remains relatively constant for a period of 10 years thus significantly contributing to building sustainability and energy cost reduction.

Vapour Permeability = 2.3×10^{-15} Kg/Pa.s.m
Permeability Resistance Factor: $\mu > 80,000$



Reem Mall, Abu Dhabi



Novozymes Biotechnology, India



One Za'abeel, Dubai



The Finance Centre, Manila

THERMOBREAK[®] LS-F

TECHNICAL SPECIFICATIONS

Physical Properties

Material:	Physically (irradiation) crosslinked closed cell polyolefin foam with factory applied reinforced aluminium foil
Density:	25 kg/m ³ (foam core only)
Thermal Conductivity: (ASTM C518)	0.032 W/mK (@ 23°C mean temp.)
Water Vapour Permeability: (ASTM E96)	2.3 x 10 ⁻¹⁵ kg/Pa.s.m
Water Vapour Permeance:	1.95 x 10 ⁻⁴ g/MN.s
Water absorption by volume: (ASTM C1763, Procedure B, 24h)	<0.2% v/v
Permeability Resistance Factor:	μ > 80,000
Resistance to fungi: (ASTM G21)	Zero Growth
Leachable Chlorides: (ASTM C871)	< 12 ppm (< 0.0012% w/w)
Ozone Resistance:	Excellent
UV Resistance:	Excellent
Operating Temperature Range:	-80 °C ~ +100 °C
GreenStar Rating: (ASTM D5116)	Low VOC Emitting
Physical Property Requirements: (ASTM C1427)	COMPLIES
REACH Directives: (1907/2006/EC)	COMPLIES

Product Certification may be plant specific. Please consult with your local representative.

Distributed by

Fire and Smoke Performance

ASTM E84	COMPLIES (NFPA 90 & B)
	Flame Spread Index: ≤ 25
	Smoke Developed Index: ≤ 50
AS1530 Part 3	Ignitability Index: 0
	Spread of Flame Index: 0
	Heat Evolved Index: 0
	Smoke Developed Index: 0-1
FM 4924 (Tube)	Up to 8" IPS (219mm) Up to 50mm wall thickness
BS 476 Parts 6 & 7:	CLASS 0
ISO 5659 Part 2	Smoke Density: COMPLIES (EN 45545:2 R1, HL3 Rating)
	Smoke Toxicity: COMPLIES (EN 45545:2 R1, HL3 Rating)

Size Availability

Preformed Tube

Wall Thickness	Min ID (mm)	Max ID (mm)	IPS Max (in)
15mm	7.0	273.0	10"
20mm	7.0	273.0	10"
25mm	7.0	273.0	10"
30mm / 35mm	9.5	254.0	8"
40mm / 50mm	12.7	219.2	8"

Tube length: 2m
Other sizes available on request

Rolls & Sheets:

- 8mm: 50m x 1200mm rolls
- 10mm: 20m x 1200mm rolls
- 12mm: 20m x 1200mm rolls
- 15mm: 20m x 1200mm rolls
- 20mm: 20m x 1200mm rolls
- 25-50mm: 2300mm x 1200mm sheets

Other sizes available on request

Thermobreak[®] is a registered trademark of Sekisui Chemical Co. Ltd. or its subsidiaries.

SEKISUI

FOAM
INTERNATIONAL
Global Foam Solutions



Australian Plant
1-5 Parraweena Rd, PO Box 2898,
Taren Point NSW 2229 Australia
Tel: +61 2 9525 9880
Email: info@sekisuifoam.com.au
Web: www.thermobreak.com

Thailand Plant
700/379 Moo 6, Tumbol Donhua-Ioh,
Amphur Muang Chonburi 20000
Tel: +66 38 213219~26
Email: info@thaisekisui.co.th
Web: www.thermobreak.com