

THERMOBREAK™ LS Tube

Thermal Insulation



**Physically Crosslinked
polyolefin foam pipe insulation**

SEKISUI

**FOAM
INTERNATIONAL**
Global Foam Solutions

**PHYSICALLY
CROSSLINKED**
SEKISUI TECHNOLOGY





The New 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 offers the same features and benefits as our standard product with the added benefit of third party certifications including UL and TUV PSB thus meeting the highest fire ratings available today for duct and pipe insulation.



Compliance to International Fire & Smoke Standards

Thermobreak™ LS meets and complies with major international fire and smoke standards for duct and pipe insulation

- > BRITISH (BS 476 Class 0)
- > ASTM E 84, UL 723 (25/50)
- > AUSTRALIAN (AS 1530.3)

Regulations and Compliancy

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

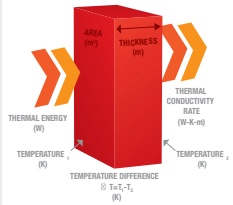


Engineered to Perform

Market leading performance

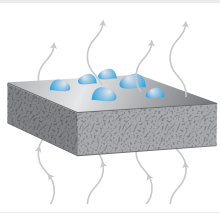
Our unique physically crosslinked technology results in a smaller and more evenly distributed cell structure. Cell structure directly affects thermal conductivity and vapour permeability. Both are key factors in insulation performance.

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



Thermal Conductivity:

0.22 BTU.in/h.ft² (73° F) 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.



Vapor 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.

Vapor Permeability = 0.002 perm-inch
Permeability Resistance Factor: $\mu > 80,000$

Building Sustainability

Building Sustainability, Energy Efficiency, Indoor Air Quality and Health & Safety, are all key elements embodied in the Green Building concept.

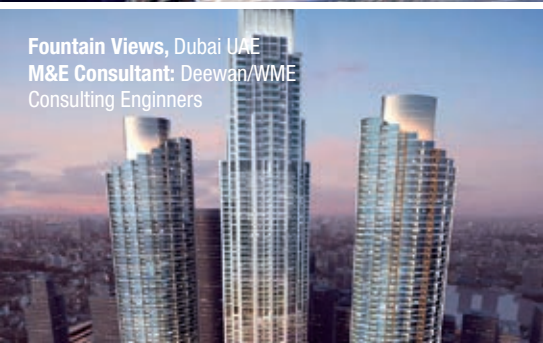
Thermobreak™ insulation is manufactured to support and comply with such initiatives and enables credit point accumulation through various building accreditation systems such as LEED and Estidama.

- Green Star Compliant (VOC)
- No CFCs or HCFCs
- Zero Ozone Depletion Potential
- Low GWP
- Zero PVC, Zero Formaldehyde
- DUBAI GBR Approved
- Compliance to RoHS Directive
- Compliance to REACH Directive
- Resistance to Mould Growth

The Address Sky Views, Dubai UAE
M&E Consultant: NORR Consulting Engineers



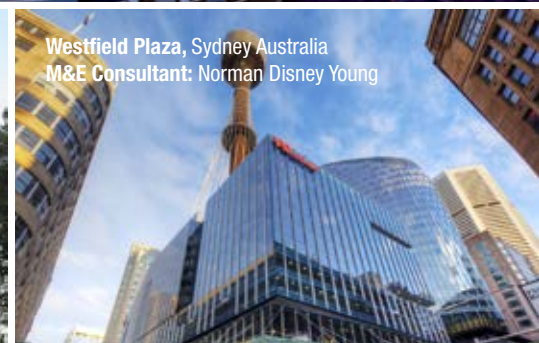
Fountain Views, Dubai UAE
M&E Consultant: Deewan/WME Consulting Engineers



University of Technology,
Sydney AUS



Westfield Plaza, Sydney Australia
M&E Consultant: Norman Disney Young



THERMOBREAK™ LS Tube

TECHNICAL SPECIFICATIONS

Physical Properties

Material:	Physically (irradiation) crosslinked closed cell polyolefin foam with factory applied reinforced aluminium foil and acrylic adhesive backing
Density:	1.5 pcf (foam core only)
Thermal Conductivity: (ASTM C518)	0.22 BTU.in/h.ft ² .°F(73° F)
Water Vapor Permeability: (ASTM E96)	0.002 perm-inch
Water Vapor Permeance: 1/2" thickness	0.0034 perm
Water Absorption by Volume: (ASTM C1763, Procedure B, 24)	<0.2% v/v
Permeability Resistance Factor:	$\mu > 80,000$
Resistance to Fungi: (ASTM C1338)	Zero Growth
Leachable Chlorides: (ASTM C871)	< 12 ppm (< 0.0012% w/w)
Ozone Resistance:	Excellent
UV Resistance:	Excellent
Operating Temperature Range:	-112°F ~ 212°F (no adhesive)
GreenStar Rating: (ASTM D5116)	Low VOC Emitting
Noise Reduction Coefficient: (AS 1045)	0.20 (12mm foam thickness) 0.30 (25mm foam thickness)
Physical Property Requirements: (ASTM C1427)	COMPLIES (Type I - Tubular)
REACH Directives: (1907/2006/EC)	COMPLIES

Fire and Smoke Behavior

ASTM E84	COMPLIES (NFPA 90A & B)
	Flame Spread Index: ≤25
	Smoke Developed Index: ≤50
BS476 Parts 6 & 7:	CLASS 0
AS1530 Part 3	Ignitability Index: 0
	Spread of Flame Index: 0
	Heat Evolved Index: 0
	Smoke Developed Index: 0-1
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 (length 6.5')

Wall Thickness		Min ID		Max ID	
(mm)	(inches)	(mm)	(inches)	(mm)	(inches)
10	3/8"	6.35	1/4"	273.1	10"
12	1/2"	6.35	1/4"	273.1	10"
15	5/8"	6.35	1/4"	273.1	10"
20	3/4"	6.35	1/4"	273.1	10"
25	1"	6.35	1/4"	273.1	10"
30	1-3/16"	6.35	1/4"	273.1	10"
40	1-1/2"	6.35	1/4"	273.1	10"
50	2"	6.35	1/4"	273.1	10"

*Other sizes available on request.

Distributed by

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



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