

# **THERMOBREAK<sup>®</sup> No-Clad**

**PRE-CLADDED EXTERNAL INSULATION**



Closed cell, physically crosslinked polyolefin foam insulation with innovative ultra tough foil facing for external applications.

**SEKISUI**

**FOAM**  
**INTERNATIONAL**  
Global Foam Solutions

**PHYSICALLY**  
**CROSSLINKED**  
SEKISUI TECHNOLOGY



## Setting the Standard



**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.

## No Clad™ Pre-cladded Insulation with Surface Protection

Ultra tough, easy to fabricate Thermobreak® No-Clad is a closed cell, physically cross-linked polyolefin foam pipe and duct insulation. Thermobreak® No-Clad is faced with a new UV and puncture resistant foil. The new foil facing consists of a very strong puncture resistant reinforcement and proprietary clear coating which is resistant to corrosion, weathering and UV. To provide system integrity and protection of joints from the elements, a specially designed foil tape with added UV protection has been developed.

## Fire and Smoke Safety

Thermobreak® No-Clad Tube is covered by the FM Approvals third party product certification system and is approved to FM 4924 standard for Pipe and equipment coverings.

In addition, Thermobreak® No-Clad has been tested to various International Fire & Smoke Standards and building regulations:

- British Standard BS 476 (Class 0);
- Australian Standard AS 1530.3.





## Ultra Tough and Easy to Fabricate

Thermobreak® No-Clad is easy to cut and fabricate and contributes to reducing installation time of mechanical services. Available with repositionable adhesive backing, Thermobreak® No-Clad provides significant cost savings compared to traditional cladded insulation.

## Extensive Technical Support

- ThermaCalc™ computer selection program with full analysis of heat flows
- Technical information bulletins
- Independent laboratory testing and certification
- Backed by the financial and technical strength of a global company with locally based engineers

## Health, Safety and the Environment

- Completely user friendly and does not emit fibres or dust during installation or in service
- Non-irritant, odourless, and will not support bacterial growth
- Green Star compliant (VOC)
- Zero Global Warming Potential (GWP)
- Made without Ozone destroying agents such as CFCs or HCFCs
- Manufactured under a certified ISO 14001 Environmental Management System



Yas Marina Circuit, Abu Dhabi



Al Khorayef Tower, Khobar KSA



Mall of Qatar, Doha

# THERMOBREAK<sup>®</sup> No-Clad

## TECHNICAL SPECIFICATIONS

### Physical Properties

Material: Physically (irradiation) crosslinked closed cell polyolefin foam with factory applied, heavy duty multilayer composite with a specially developed UV and weather durable coating.

Density:	25 kg/m <sup>3</sup> (foam core only)
Thermal Conductivity: (ASTM C518)	0.032 W/mK (@ 23° C mean temperature)
Puncture Resistance (ASTM D4833)	>400 N
Tear Testing (ASTM D751)	> 60 N MD > 50 N CD
Tensile Testing (ASTM D751)	> 1000 N MD > 900 N CD
MD= Machine Direction, CD=Cross Direction	
UV & Weathering (3000 hr QUV exposure)	Excellent No change in performance or appearance
Salt Resistance (Internal test) (2 week immersion in 5 % salt solution)	No visible change in appearance
Water Vapour Permeability (ASTM E96)	< 4.1 x 10 <sup>-15</sup> kg/Pa.s.m (basis 25mm thickness) (0.015 mg.m/N.h)
Water Vapour Permeance	< 1.7 x 10 <sup>-4</sup> g/MN.s
Permeability Resistance Factor:	μ > 40,000
Water Absorption by Volume: (ASTM C1763, Procedure B, 24h)	< 0.2% v/v
Resistance to Fungi: (ASTM G21)	Zero Growth
Ozone Resistance:	Excellent
Operating Temperature:	-80° C to 100° C (no adhesive)
Leachable Chlorides: (ASTM C871)	< 12 ppm (< 0.0012% w/w)

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

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

### Size Availability

Thermobreak<sup>®</sup> No-Clad is available in a range of sizes for pipes and ducts.

**Tube (Standard Pipe):** ID's from 25mm to 219mm, with wall thicknesses from 25mm to 50mm in 2m lengths.

**Tube (Large Pipe):** Up to 610mm ID with thicknesses up to 75mm in 1.2m lengths.

**Rectangular Duct:** Available in sheets 1200mm x 2300mm in thicknesses of 15mm to 64mm (pre-cut "V" notched sheets available on request).

**Round Duct (Thermobreak Quadro RD):** Up to 1000mm ID with thicknesses up to 96mm in 1.2m lengths.

\*Other sizes available on request

### Fire and Smoke Performance

BS 476 Part 6&7	Class 0
FM 4924(pipe) (up to 8" IPS & 50mm wall thickness)	FM Approved
AS 1530.3(1999)	
Ignitability Index	0
Spread of Flame Index	0
Heat Evolved Index	0
Smoke Develop Index	0-1



**SEKISUI**

**FOAM  
INTERNATIONAL**  
Global Foam Solutions



#### Head Office

1-5 Parraweena Rd, PO Box 2898,  
Taren Point NSW 2229 Australia  
Tel: +61 2 9525 9880  
Fax: +61 2 9525 8004  
Email: [info@sekisuifoam.com.au](mailto:info@sekisuifoam.com.au)  
Web: [www.sekisuifoam.com.au](http://www.sekisuifoam.com.au)

#### Queensland Branch

15/853 Nudgee Rd PO Box 448  
Northgate QLD 4013 Australia  
Tel: +61 7 3267 7100  
Fax: +61 7 3267 7166  
Email: [info@sekisuifoam.com.au](mailto:info@sekisuifoam.com.au)  
Web: [www.sekisuifoam.com.au](http://www.sekisuifoam.com.au)