THERMOBREAK® RT

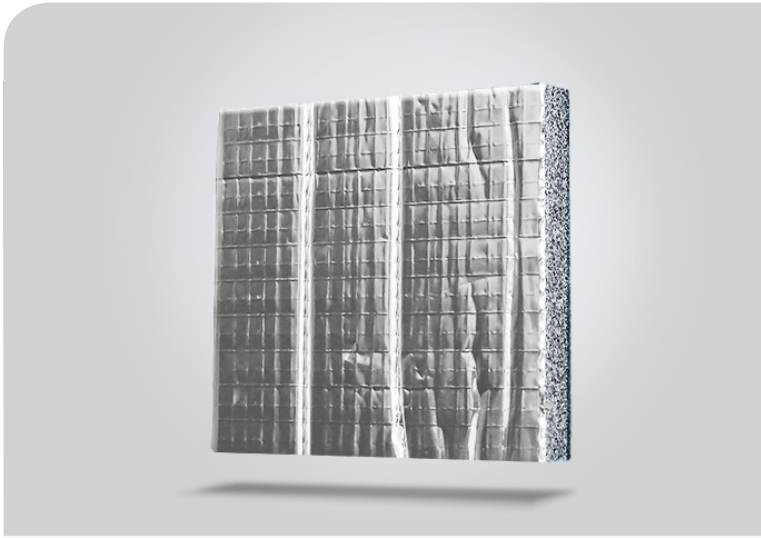
lightweight thermal insulation

Thermobreak® RT is a premium, thermal insulation product manufactured from physically crosslinked, closed-cell polyolefin foam. Unlike open-cell foam or fibre-based insulation, Thermobreak® RT is designed to maintain thermal performance when exposed to moisture.

Thermobreak® RT can replace conventionally used EPDM and nitrile based foams to combat condensation around air conditioning ducts, walls and ceilings. Its lightweight nature makes it the ideal choice for extremely weight sensitive applications such as in the rail industry.

The flammability properties from Thermobreak® RT meet some of the most stringent fire requirements. It achieves some of the highest fire ratings set out by rail and building industries such as EN 45545-2, BS 476 parts 6 & 7 and BSS 7239.

Thermobreak® RT's exceptional durability and lightweight properties offer comfortable handling for all applications. It is also available with a facing to enhance product performance and protect it from water, oil and other liquid ingresses.



applications

- Train interior insulation
- Air conditioning ducts / units
- HVAC transportation equipment

SPECIFICATIONS

Colour	Black Reinforced aluminium facing
Available	Nominal sheet width: 1200 mm (47 in) Thickness: 5 mm to 25 mm (0.2 in to 1 in)
	or custom depending on MOQ

features

- Superior thermal properties
- Achieves some of the highest fire ratings
- Lightweight
- Excellent ozone and UV resistance
- Durable and fibre-free
- Easy to handle and install
- Varying range of thicknesses
- Optional adhesive backing available

PRODUCT SPECIFICATIONS

Product name	Thickness		Density*	Nominal width (sheet)	Operating temperature range
	Nominal	Tolerance			
Thermobreak® RT	5 mm (0.2 in)	-0.5 mm / +1.0 mm (-0.02 in / +0.04 in)	25 kg/m³ (1.56 lb/ft³)	1200 mm (47 in)	-80 °C to +100 °C (-112 °F to 212 °F)
	6 mm (0.25 in)	-0.5 mm / +1.5 mm (-0.02 in / +0.06 in)			
	8 mm (0.3 in)	-1.0 mm / +1.5 mm (-0.04 in / +0.06 in)			
	10 mm (0.4 in)				
	12 mm (0.5 in)				
	15 mm (0.6 in)	-1.0 mm / +2.0 mm (-0.04 in / +0.08 in)			
	20 mm (0.8 in)				
	25 mm (1 in)	-1.0 mm / +2.5 mm (-0.04 in / +0.1 in)			

*Tolerances: Density ±10%, Width: -0/+20 mm (0.8 in); *Foam core only*

MATERIAL PROPERTIES

Test Method	Property	Results
EN 45545-2 (ISO 5658-2)	Spread of flame	R1, HL3 (Complies for most interior surfaces and cavities in railway vehicles of operation categories 1, 2 & 3)
EN 45545-2 (ISO 5660-1 : 50 kWm^{-2})	Heat release rate by cone calorimeter	
EN 45545-2 (ISO 5659-2 : 50 kWm^{-2})	Smoke generation (optical density)	
BS 476 Part 6	Fire propagation	Complies with Class 0
BS 476 Part 7	Surface spread of flame	
BS 6853 Annex B	Weighted summation of toxic fume	R < 1.0
BS 6853 Annex B2	Smoke toxicity	Class 1B
BS 6853 Annex D 8.4	Smoke density	
ASTM E 162	Surface flammability	• Complies for US (FRA) Federal railroad administration requirements (Title 49- Transportation Part 238). • Complies for US (DOT) Department of transportation requirements for acoustic insulation of transit bus and vans (Docket 90-A) • Complies to NFPA 130 requirements for interior vehicle components • Complies to PRIIA
ASTM E 662	Optical Density of Smoke Generated	
ASTM E 1354	Heat and Smoke Release Rates (Oxygen Consumption Calorimeter)	
BSS 7239	Toxic Gas Generation by Materials on combustion	Complies to PRIIA
ASTM C518	Thermal conductivity	0.03 W/m.K (@ 10 °C) 0.032 W/m.K (@ 23 °C)
ASTM E 96	Water vapor transmission & permeance	0.195 $ng.Pa^{-1}.s^{-1}.m^{-2}$ (0.0034 Perms)
	Permeability	2.34 x 10^{-3} $ng.Pa^{-1}.s^{-1}.m^{-1}$
JIS K6767	Water absorption by volume	< 0.1% v/v
ASTM G21	Resistance to fungi	Zero growth

For further information and contact details, please visit our website pyroteknc.com