

R-TI

RAIL THERMAL INSULATION

Technical Data Sheet
December 2019



SIDERISE[®]

Acoustic, fire and thermal insulation specialists

SIDERISE® ‘R-TI’ RAIL THERMAL INSULATION

A flexible and fire resistive light-weight melamine foam, offering excellent thermal qualities, for floor, wall and ceiling insulation applications for rolling stock.

Application

SIDERISE® ‘R-TI’ thermal insulation is flexible light-weight melamine foam with a fine open cell structure. Additional benefits offered by the product include: reaction to fire performance, excellent thermal insulation properties and an elevated operating temperature.

Common applications include: external lining of ductwork and ventilation equipment, and thermal insulation of carriage walls, floors and ceilings.

Parts can be supplied cut to size included CNC machining of complex shapes. Parts are then packed with parent kits and child sub-kits for ready installation according to the manufacturers standard operating procedure (SOP).

Benefits

- Achieves HL3 to EN 45545-2 : 2013 - fire protection on railway vehicles
- Achieves Cat 1a to BS 6853 and M1/F1 to NF P 92-507 and NF F 16-101
- Light-weight (9kg/m³)
- Excellent thermal conductivity
- Can be supplied as a composite solution

Product description

SIDERISE® ‘R-TI’ thermal insulation is faced with re-enforced series acoustic foam is available with a pressure-sensitive adhesive backing film to simplify installation. Optionally, the product can be supplied with an extensive range of facing materials or spray applied surface coatings.

The material can be supplied in composite form in combination with lead foils, polymeric barriers and damping sheets.

An in-house cutting service is available for supply to final sizes/shapes using a variety of processing techniques including die-cutting and CNC cutting.

A full ‘kitting’ and packing service is available for OEM supply.

Installation

The material is normally adhered to the background surface using a separate adhesive or by means of the optional pressure-sensitive adhesive backing (contact our technical team for a specification sheet on pressure-sensitive adhesive films for properties and limitations).

Additionally the product can be mechanically fixed (using large headed fixings or spreader washers). Our insulation support pins and non-return washers represent a suitable fixing.

Please contact our technical team for advice on suitable adhesives and mechanical fixings.

Acoustic Performance

Thickness (mm)	Sound Absorption Coefficients					
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz
25	0.10	0.40	1.00	0.50	0.40	0.45
50	0.30	1.00	0.70	0.35	0.40	0.40

Fire Performance

EN 45545-2 : 2013 - Fire protection on railway vehicles	HL3
BS 476-6	I = 4.5 i ₁ = 3.0
BS 476-7	Class 1
BS6853 D8.4 and B.2	Cat 1a
NF P 92-507	M1
NF F 16-101	F1

Technical specification

Form supplied (mm)	Standard sheet size: 2500 x 1250 Other forms: Linear 3D sections and die-cut parts
Standard thickness (mm)	6, 10, 12, 15, 20, 25, 35, 40, 45, 50, 75, 100 (can be slit from block to any thickness, 3mm to max block thickness)
Colour	Re-enforced aluminium foil / light grey melamine foam
Maximum application temp (ISO 3386-1 defined)	1,000h: 220°C 5,000h: 200°C 20,000h: 180°C

Property	Standard	Units	Value
Density	EN ISO 845	kg/m ³	9.0 ± 3.0
Compressive Strength	EN ISO 3386-1	kPa	>9
Tensile Strength	ISO 1798	kPa	>130
Elongation at break	ISO 1798	%	>22
Thermal conductivity	EN 12667	W/mK	0.035 (10°C)
Thermal resistance	EN ISO 2440 (defined by EN ISO 3386-1)	°C	240

Additional information

The following options are available:

- A range of protective/decorative facings.
- Can be supplied with high performance acrylic pressure-sensitive adhesive (PSA) backing

The following information is available upon request or via download from our website:

- 1/3rd octave absorption coefficients available on request
- Safety Data Sheet

Environmental

SIDERISE® 'R-TI' thermal insulation is environmentally friendly.

- It contains no Volatile Organic Compounds (VOCs) and no very Volatile Organic Compounds (vVOCs)
- Zero Ozone Depleting Potential
- Global Warming Potential of less than 5
- Recyclable

Technical support

For further information please contact our technical team at the address below.

Available CPD's

Contact SIDERISE® for further information on our CPDs:

- Architectural Acoustics
- Industrial Noise Control Engineering

Sales & Technical Support

Sales Enquiries

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