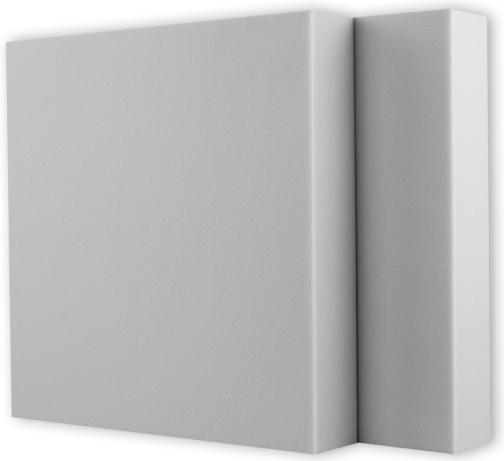
# SORBERMEL® H

## hydrophobic fire-resistant and sound-absorbing melamine foam



Sorbermel H is a flexible, open-cell, acoustic and thermal insulation product constructed using a melamine insulation base. It is lightweight, flame retardant and offers excellent sound absorption and thermal insulation properties. In addition, Sorbermel H incorporates patented hydrophobic treatment, which repels condensation and maintains thermal insulation of the product in high humidity environments. Hydrophobic properties are not only present on the surface of the material but also throughout its thickness hence maintaining its resistance even when Sorbermel H is cut to shape. The product is also available with a variety of facings to enhance its fire-resistant properties or to provide a layer of protection to the melamine base.

Sorbermel H is dimensionally stable, inherently moisture resistant and resists foam rot. The foam structure features a 3D network of thin melamine resin filaments that absorbs sound energy to prevent reverberation.

Being low-weight, it contributes to the energy efficiency of rail and utility vehicles, enhancing passenger safety. It's also particularly suited to building interiors where surfaces of insulation are exposed.

Sorbermel Horber is a favoured choice in weight-sensitive applications, harsh environmental conditions, or where enhanced fire safety properties are required. Its unique flexibility allows for easy installation with basic tools, making it perfect for use in rail, marine, automotive, building or construction industry.

### VOC, ODP, HEALTH AND SAFETY

Sorbermel H is non-toxic and safe to handle by methods prescribed in the Safety Data Sheet.

### SPECIFICATIONS

| | |
|---|---|
| Colour | Light grey |
| Available | Standard sheet size: 2.1 m x 1.25 m (6.89 x 4.1 ft)<br>Thickness range: 10 to 40 mm (0.39 x 1.57 in) |
| | Custom sizes, facings and/or thicknesses available depending on MOQ |

## applications

- Transport: engine compartments and cabin insulation for trains, buses, trucks or automotive
- Commercial buildings: HVAC systems
- Industrial: Machinery/generator set enclosures, electrical equipment, wall/ceiling linings for plant and equipment rooms

## features

- Lightweight - offers energy efficiency/passenger safety in the transport industry
- Wide sound absorption range and high thermal insulation properties
- Excellent fire retardant properties
- High continuous operating temperature
- Free of mineral fibres
- Resists hydrolysis - will not rot
- Long service life - constant physical properties over a wide temperature range
- Self-supporting – no additional structures required to maintain shape
- Easy to cut, shape, fabricate and install
- Custom kit options available to meet size requirements Available with different surface coverings and self-adhesive backing for ease of installation
- Available with hydrophobic treatment

## PRODUCT SPECIFICATION

| Thickness | Density EN ISO 845 | Standard sheet size (Length x Width) | Thermal conductivity (W/mK) DIN 12667 | Elongation at break DIN 53571 | Compressive strength EN ISO 3386-1 | Tensile strength ISO 1798 | Operating temperature DIN EN ISO 2578 |
|---|---|---|---|---|---|---|---|
| 10 to 40 mm (0.39 x 1.57 in) | 9 kg/m³ (0.56 lb/ft³) | 2.1 x 1.25 m (6.89 x 4.1 ft) | 0.035 @ 10 °C (50 °F) | 10% | 9 kPa (min) | 120 kPa (min) | 1000h > 200 °C (392 °F) 20000h > 150 °C (302 °F) Minimum -50 °C (-58 °F) |

*Tolerances: Length: -0/+50 mm (2 in); Width: -0/+5 mm (0.2 in); Thickness: ±2 mm (0.08 in); Density: ±1.5 kg/m³ (0.09 lb/ft³)*

*Results based on BASF Basotect® G+*

*All above products are available with pressure-sensitive adhesive backing. Under extreme temperature and humidity conditions, air flow or where the substrate surfaces cannot be free from contaminants, mechanical fixing will be required. For all inverted installations including ceiling installations, mechanical fixing must be done in addition to pressure sensitive adhesive. Please consult your local Pyrotek representative for more information.*

## MATERIAL PROPERTIES

| Test method | Property | Report no. | Results |
|---|---|---|---|
| EN 45545-2 (ISO 5658-2) | Spread of flame | SL/Z-695/EN45545-R1/0800/2025 | R1 (HL1, HL2, HL3) |
| EN45545-2 (EN 17084 (1) : 50 kWm-$^{2}$) | Gas Toxicity | | |
| EN 45545-2 (ISO 5660-1: 50kWm$^{-2}$) | Heat release rate by cone calorimeter | | |
| EN 45545-2 (ISO 5659-2: 50kWm$^{-2}$) | Smoke generation (optical density) | | |
| Internal using Rame - Hart Goniometer | Hydrophobicity Contact Angle | - | 127 deg |
| ECE R 118 | Annex 6 - Horizontal Burning Rate | E20*118R03/01*004041*00 | Pass |
| | Annex 7 - Determination of Burning Behaviour | | Pass |
| | Annex 8 - Vertical Burning Rate | | Pass |

## ACOUSTIC PERFORMANCE

| Frequency (Hz) | Sorbermel H 25 mm | Sorbermel H 50 mm |
|---|---|---|
| 100 | 0.06 | 0.13 |
| 125 | 0.10 | 0.16 |
| 160 | 0.11 | 0.23 |
| 200 | 0.15 | 0.31 |
| 250 | 0.21 | 0.54 |
| 315 | 0.25 | 0.69 |
| 400 | 0.37 | 0.83 |
| 500 | 0.49 | 0.97 |
| 630 | 0.60 | 0.95 |
| 800 | 0.69 | 0.94 |
| 1000 | 0.79 | 0.97 |
| 1250 | 0.81 | 0.96 |
| 1600 | 0.82 | 0.90 |
| 2000 | 0.83 | 0.87 |
| 2500 | 0.83 | 0.91 |
| 3150 | 0.87 | 0.93 |
| 4000 | 0.88 | 0.93 |
| 5000 | 0.86 | 0.91 |
| NRC | 0.60 | 0.85 |
| SAA | 0.57 | 0.82 |
| $\alpha_w$ | 0.50 (MH) | 0.80 |

*Tested to ISO 354:2003 at University of Canterbury, New Zealand*
*Report Numbers: 297 & 298*
*Acoustic results are based on unfaced Sorbermel*