# WAVETECH ACOUSTIC & THERMAL SOLUTIONS

SKYMAX

TECHNICAL DATA SHEET

## High-performance sound absorber-integrated noise barrier composite

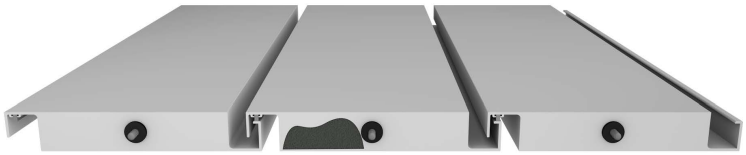
Wavetech is a unique acoustic composite product combining the superior soundproofing performance of the flexible mass loaded Wavetech composite, with high density acoustic foam infused compound. The product is designed to reduce unwanted sound in applications such as HVAC systems, Opening Louvred Roof enclosures, recreational crafts, smaller marine vessels and the transport industry.

Wavetech's high-performance is achieved by inserting the mass barrier between the two walls of the Skymax Aerotech louvre blade. It keeps the noise barrier separate from the structure it is bonded to, allowing for flexibility to reflect and absorb the transmission of sound.

Tests have revealed that increasing the thickness of the foam separating the barrier improves the product's performance in some frequencies without affecting the overall weight. The combination of these properties allows Wavetech to target a broad range of frequencies, making it one of the most versatile acoustic solutions in the market place.

### VOC, ODP, HEALTH AND SAFETY

Wavetech is non-toxic and safe to handle by methods prescribed in the Safety Data Sheet. No ozone depleting substances are used during the manufacture of Wavetech.



## Applications

- Acoustic and thermal insulation for Aerotech Opening Louvred Roof Systems, Viewtech Vertical Louvre Systems & Suspended Ceiling Panels.
- Acoustic and thermal insulation for wall cavities & ceiling lining.

## Features

- Multifunction product: an absorber and barrier in one
- No ozone-depleting substances generated during manufacture
- Free from formaldehyde, phenolic resins and irritating fibres
- Engineered to resist degradation (foam rot) more than traditional acoustic foam
- Low spread of flame surface
- Quick and easily installed in awkward places
- Easy to cut, adhere or mechanically fasten into position
- Matching self-adhesive tape or sprayable coating for sealing joints and edges of the foam
- Can be constructed with other absorption products such as Sorbermel (See Sorberbarrier ML range technical data sheets)

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## PRODUCT SPECIFICATION

| Product | Total thickness | Construction Absorptive layer (mm)/Mass barrier (kg)/ decoupler (mm) | Sheet size[1] | Operating temperature range |
|---|---|---|---|---|
| **Wavetech** 20/4.5 | 20 mm | 12/4.5/06 | 1.3 x 1.0 m and 1.3 x 2.2 m | -40 to100 °C (Continuous) -40 to 120 °C (Intermittent) |
| **Wavetech** 25/4.5 | 25 mm | 12/4.5/12 | 1.3 x 1.0 m and 1.3 x 2.2 m | |
| **Wavetech** 32/4.5 | 32 mm | 25/4.5/06 | 1.3 x 1.0 m and 1.3 x 2.2 m | |
| **Wavetech** 32/8.0 | 32 mm | 25/8.0/06 | 1.3 m x 1.0 m | |
| **Wavetech** 50/4.5 | 50 mm | 25/4.5/25 | 1.3 x 1.0 m and 1.3 x 2.2 m | |
| **Wavetech** 50/8.0 | 50 mm | 25/8.0/25 | 1.3 x 1.0 m | |
| **Wavetech** 75/4.5 | 75 mm | 50/4.5/25 | 1.3 x 1.0 m | |
| **Wavetech** 75/8.0 | 75 mm | 50/8.0/25 | 1.3 x 1.0 m | |

*Tolerances: Length: ±1%, Width: -0/+5 mm, Thickness: ±3 mm, Weight: ±10%*

*[1]Useable width is specified. Some surface coverings such as foils, films or fabric may overhang the useable width. Please consult your sales representative as minimum order quantities may apply.*

*All the above products are available with pressure-sensitive adhesive backing. Under extreme temperature conditions or where the substrate surfaces cannot be free from contaminants, mechanical fixing will be required on vertical surfaces. For all inverted installations, including ceiling installations, mechanical fixing must be done in addition to PSA adhesion.*

## MATERIAL PROPERTIES

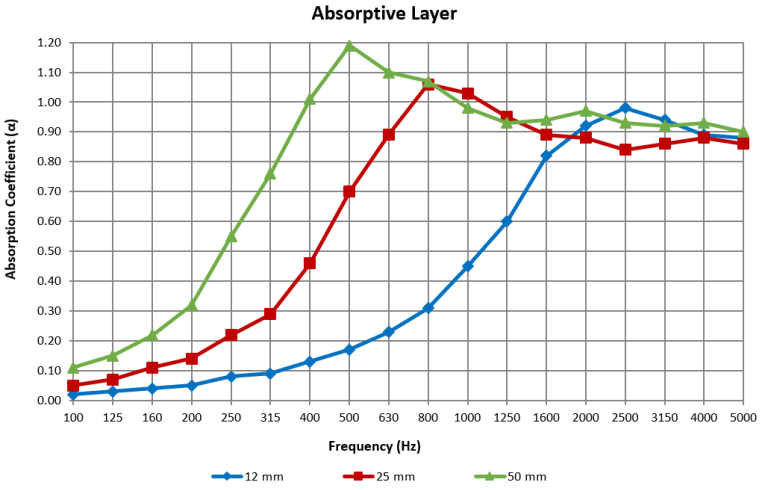
| Test method | Property | Report no. | Results |
|---|---|---|---|
| UL 94* | Flammability of plastic materials | 13513JY7 | HF-1 |
| FMVSS 302* | Flammability of interior materials | 14713JY1 | Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles |

**Result applies to plain foam only.*

## ACOUSTIC PERFORMANCE (ABSORPTIVE LAYER)

| Frequency (Hz) | 12 mm | 25 mm | 50 mm |
|---|---|---|---|
| 100 | 0.02 | 0.05 | 0.11 |
| 125 | 0.03 | 0.07 | 0.15 |
| 160 | 0.04 | 0.11 | 0.22 |
| 200 | 0.05 | 0.14 | 0.32 |
| 250 | 0.08 | 0.22 | 0.55 |
| 315 | 0.09 | 0.29 | 0.76 |
| 400 | 0.13 | 0.46 | 1.01 |
| 500 | 0.17 | 0.70 | 1.19 |
| 630 | 0.23 | 0.89 | 1.10 |
| 800 | 0.31 | 1.06 | 1.07 |
| 1000 | 0.45 | 1.03 | 0.98 |
| 1250 | 0.60 | 0.95 | 0.93 |
| 1600 | 0.82 | 0.89 | 0.94 |
| 2000 | 0.92 | 0.88 | 0.97 |
| 2500 | 0.98 | 0.84 | 0.93 |
| 3150 | 0.94 | 0.86 | 0.92 |
| 4000 | 0.89 | 0.88 | 0.93 |
| 5000 | 0.88 | 0.86 | 0.90 |
| NRC | 0.40 | 0.70 | 0.90 |
| SAA | 0.40 | 0.70 | 0.90 |
| $\alpha_w$ | 0.25 (H) | 0.50 (MH) | 0.85 |

*Tested to ISO 354:2003 at University of Canterbury, New Zealand*
*Report Numbers: 282, 283 & 284*



## ACOUSTIC PERFORMANCE (BARRIER LAYER)

| Frequency (Hz) | 4.5 kg/m² | 8 kg/m² |
|---|---|---|
| 100 | 15 | 19 |
| 125 | 14 | 16 |
| 160 | 15 | 17 |
| 200 | 15 | 19 |
| 250 | 17 | 21 |
| 315 | 19 | 22 |
| 400 | 21 | 24 |
| 500 | 22 | 25 |
| 630 | 23 | 27 |
| 800 | 25 | 28 |
| 1000 | 27 | 30 |
| 1250 | 29 | 32 |
| 1600 | 31 | 34 |
| 2000 | 33 | 36 |
| 2500 | 34 | 37 |
| 3150 | 35 | 38 |
| 4000 | 37 | 40 |
| 5000 | 39 | 42 |
| $R_w$ | 26 | 30 |
| STC | 26 | 30 |

*Tested to ASTM E90-09 at Riverbank Acoustical Laboratories, USA*
*Report Numbers: TL18-642 & TL18-643*