

Automotive Technical Data Sheet

3M™ Thinsulate™ Acoustic Insulation TAI2027

TAI2027

General Description

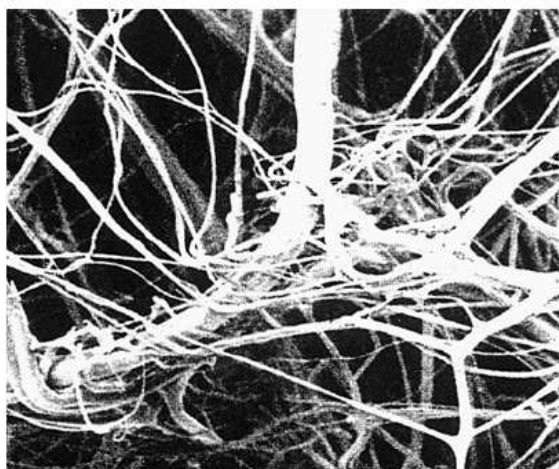
This non-woven mat has excellent sound absorbing properties useful in many automotive interior applications, for example inside door panels, instrument panels, pillar stuffers, and package trays. It is compressible, non-linting, lightweight, and can be easily die-cut. A white polyolefin scrim on one side protects the fibres.

General Construction

The web is composed of 35% polyester staple fibres, and 65% polypropylene fibres. The polypropylene fibres are extremely fine, producing the high-energy absorption characteristic with the low weight. The polyester fibres are added to strengthen the web. The white scrim attached to one side is a 100% polypropylene non-woven fabric.

Magnified image of Thinsulate™ Acoustic Insulation showing fine PP and larger PE fibres.

Thinsulate™ Acoustic Insulation material



Special Characteristics

Suitable for application in vehicle cabin and luggage compartment interiors, especially vertical surfaces. As the material compresses easily, it is not recommended for applications under the carpet (or other flooring) but its lightweight makes it ideal for other horizontal applications like combining with headliners for example.

Attaching to trim panels is recommended, preferably using ultrasonic or heat spot welding, but adhesives (transfer tapes or hot melt) may also be used. Not recommended for applications where temperatures will be above 120°C.

As the fibres are hydrophobic, this material will not absorb water. Therefore the risk of mildew and odours developing are minimal allowing this product to be used in humid or moist conditions.

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General Properties

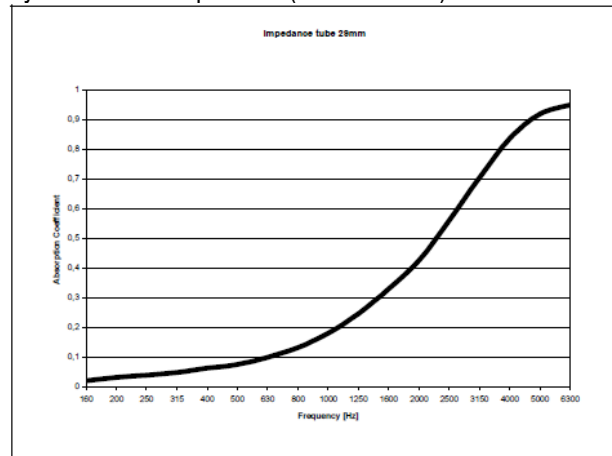
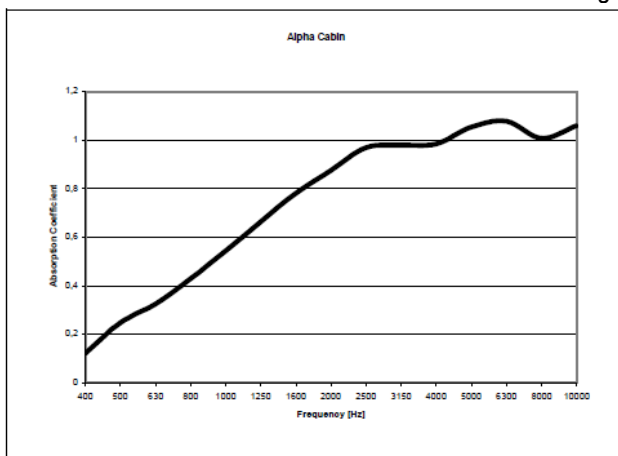
Composition 65% polypropylene, 35% polyester (Web)
 Colour White web with white scrim.

Physical Properties (Typical values)

Thickness 13mm (SAE J1355 @ 0,002 psi, 14 N/m²)
 Surface weight 225 g/m²
 Density 16.2 kg/m³
 Flammability 0mm/min as per FMVSS 302 (DIN75200, ISO 3795 (1976))
 Temperature stability 120°C for 2000 Hours

Acoustical Properties

1. Alpha Cabin Measurement with 1,2m² sample measuring Random Incidence Sound. Tested with scrim facing away from the microphones.
2. Dual Microphone Impedance Tube Method that measures Normal Incidence Sound. Tested with the scrim facing away from the microphones. (ASTM E1050)



Additional Information This data sheet contains typical information specific to the product. This information should not be used to determine a product specification. Samples and further information on the use of the product are available separately.

Important notice to purchaser All statements, technical information, and recommendations herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. Please ensure before using our product that it is suitable for your intended use. All questions of liability relating to this product are governed by the Terms of Sale subject, where applicable, to the prevailing law.



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