



Automotive Technical Data Sheet

3M™ Thinsulate™ Acoustic Insulation TH 4320-1

TH 4320-1

General Description

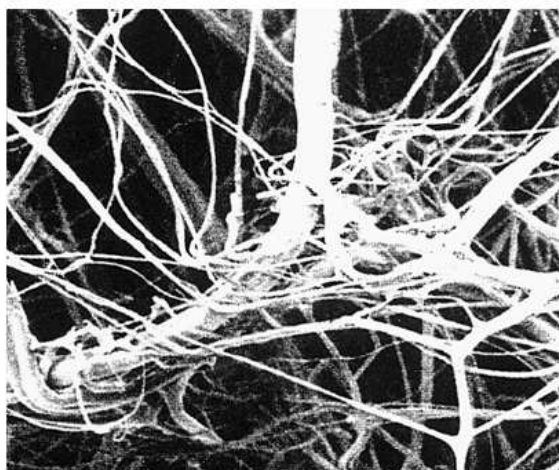
Thinsulate™ Acoustic Insulation TH series is specifically designed to improve acoustic and thermal performance in automotive applications. It is compressible, non-linting, lightweight, and can be easily die-cut. The product has a single performance membrane that is positioned facing the sound source. It has also been surface treated on both sides to provide better attachment of the membrane and better abrasion resistance of the fibre.

General Construction

The web is composed of 32% polyester staple fibres, and 68% 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 performance membrane 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 90°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

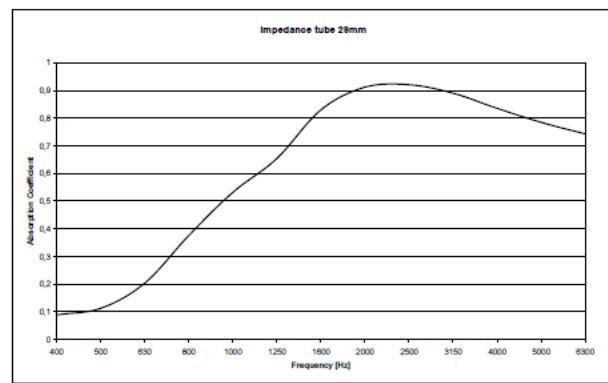
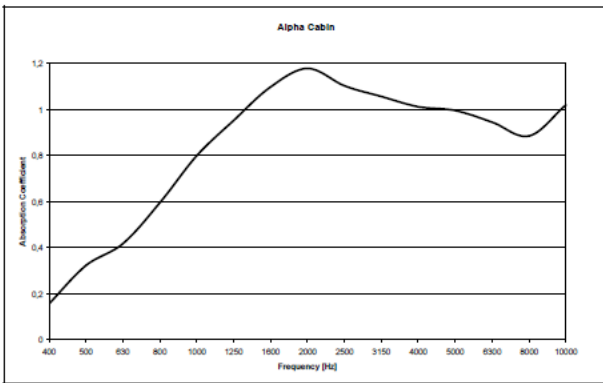
Composition	68% polypropylene, 32% polyester (Web) 100% polypropylene (Membrane)
Colour	White with white membrane

Physical Properties (Typical values)

Thickness	16 mm (Tested to 3M procedure OTM20005)
Surface weight	260 g/m ² (Tested to 3M procedure OTM 1151)
Density	16.2 kg/m ³
Flammability	Meets FMVSS 302 (DIN75200, ISO 3795 (1976))
Temperature stability	90°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 towards to the microphones.



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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 Issue Date: 11/2007