

3M™ Thinsulate™ Acoustic Insulation TC Series

Technical Data Sheet



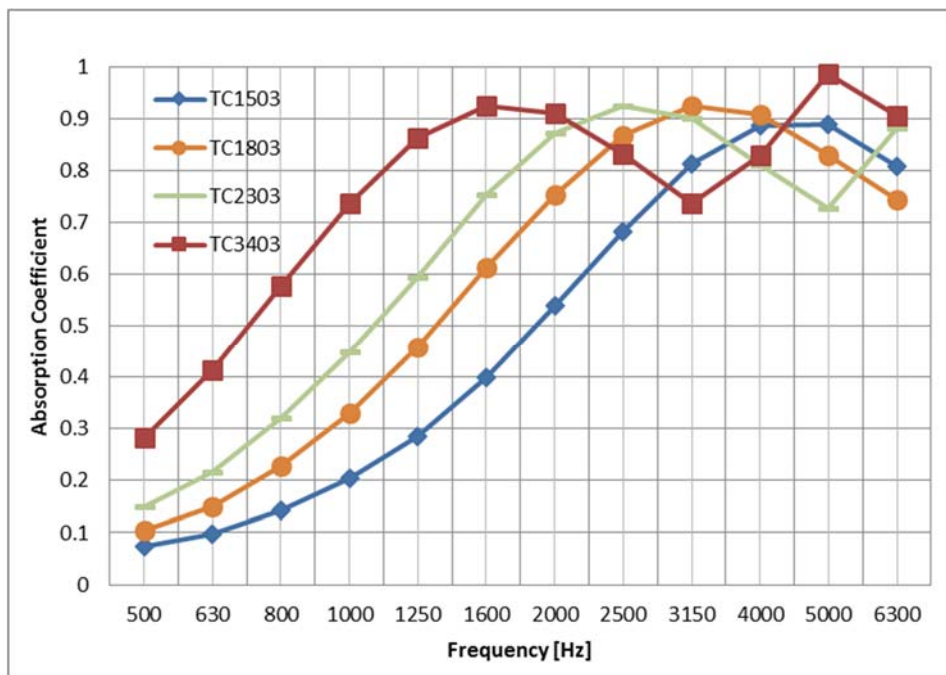
General Description

3M™ Thinsulate™ Acoustic Insulation TC Series is a cavity filling solution for automotive sound insulation applications. The products are uniquely high performance and low density making them ideal for mass reduction applications. They are readily processed by conventional techniques such as die-cutting, heat sealing, and ultrasonically bonded.

Thinsulate TC Series are compressible, providing the ability to fit a wide range of applications where varying thicknesses are highly desired, such as door trim panels and body side trim panels. The products are highly conformation and designed to accommodate the irregular spaces behind trim panels, headliners, and instrument panels. Thinsulate TC Series are products are designed for optimal cavity filling — the products fill voids in pillars, behind trim panels, in headliners, or instrument panels to help reduce unwanted noise.

Acoustic Properties

The following technical information and data is based upon limited 3M testing conditions and should not be used for specification purposes.



* Tested using combined 29 and 100 mm impedance tubes; natural thickness is measured using 0.001 psi (7 Pa); product natural thicknesses of TC1503, TC1803, TC2303, and TC3404 are 18, 21, 28 and 44 mm, respectively.

Physical Properties

	Unit	TC1503	TC1803	TC2303	TC3403
Weight ^A	g/m ²	150	185	232	332
Thickness ^B	mm	16	21	27	41
Density	Kg/m ³	9.4	8.8	8.6	8.1
Thermal Properties					
R-Value ^C	m ² K/W	0.34	0.46	0.54	0.81
k-Value ^D	W/mK	0.047	0.046	0.050	0.051
FMVSS 302		Pass	Pass	Pass	Pass

^A Weight is the mass per unit area of the entire absorber composite.

^B Nominal thickness is measured using a 12 in² plate with 0.002 psi (= 14N/m²) applied to the sample per SAE J1355.

^C R-Value is the thermal resistance of the insulation measured at the corresponding thickness per ASTM C518.

^D k-value is thermal conductivity of the insulation material per ASTM C518.

Regulatory Information

Read all Health Hazard, Precautionary, and First Aid statements found in the Safety Data Sheet (SDS) and/or product label prior to handling or use. Visit www.3M.com/msds to obtain an SDS.

Contact Information

The information provided in this technical document is intended as a guide for this product. For more information or help in selecting a 3M product for an application, please contact your 3M technical service representative or call 1-800-328-1684.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed. **Product Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. **Warranty, Limited Remedy, and Disclaimer:** Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price. **Limitation of Liability:** Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



Automotive and Aerospace Solutions Division

3M Center

St. Paul, MN 55144-1000

Phone 1-800-328-1684

Web www.3M.com/autosolutions

3M and Thinsulate are trademarks of 3M Company

Please recycle. Printed in USA.

© 3M 2017 All rights reserved.