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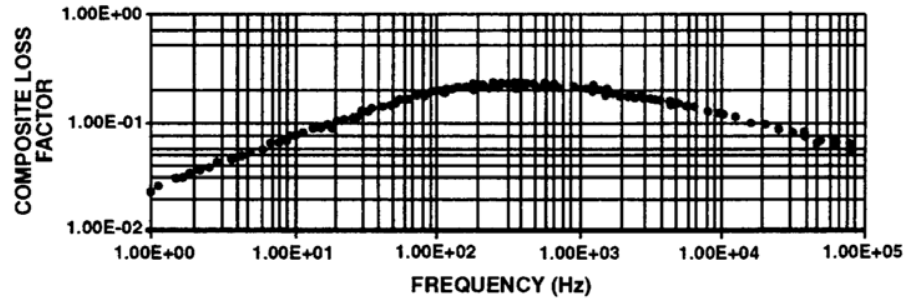
3M™ Damping Foil

2552

Typical Damping Properties (continued)

Test Method: The following data were obtained by doing a frequency sweep from 1 to 100 radians/sec (0.16 to 16 Hz) at 5 different temperatures: -20°, 10°, 0°, 10°, and 22°C. A 3 point bend geometry was used on the Rheometrics RSA II. Time – temperature superposition was used to create the master curve for a reference temperature of 22°C.

**3M™ Damping Foil 2552 on 18 mil Stainless Steel
T = 22°C**



Data Interpolation:

To determine the damping properties at ambient temperature 72°F (22°C), proceed as follows:

- 1) Locate the desired frequency on the bottom HORIZONTAL scale.
- 2) Follow the chosen frequency up to the point of intersection with the plotted data.
- 3) From this intersect, go left to the vertical scale.
- 4) Read the COMPOSITE LOSS FACTOR for the chosen frequency.

Note: Please note that the data has been determined by combining 3M™ Damping Foil 2552 with a panel of 0.018" thick stainless steel with a hardness of T-22 and is presented as a reference to the damping that can be achieved when combined with a material of this description and tested at ambient temperature of 72°F (22°C).

Solvent and Fuel Resistance

When properly laminated between two impervious materials, the polymer will resist intermittent exposure to mild acids and alkalies, most oils, grease, gasoline, kerosene, JP-4 fuel, hydraulic fluids, and other typical aromatic and aliphatic hydrocarbon and ketone solvents.

Note: Continuous submersion in chemical solutions like solvents or fuels is not recommended.

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Product Construction and Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		ASTM Test Method
Aluminum Backing:	10.0 mils (0.25 mm)	
Acrylic Viscoelastic Polymer:	5.0 mils (0.13 mm)	
Easy-release Liner:	58# poly-coated paper	
Total Product Thickness:	15.0 mils (0.38 mm)	
Total Product Weight:	0.17 lbs./sq. ft.	
Adhesion to Steel:	65 oz./in. width (72 N/100 mm)	D-3330
Tensile Strength:	126 lbs./in. width (2205 N/100 mm)	D-3759
Elongation at Break:	12%	D-3759
Temperature Use Range:	-25° to 175°F (-32° to 80°C) Peak damping from 32° to 140°F (0° to 60°C)	
Minimum and Maximum Widths:	2 in. minimum, 23.5 in. maximum	
Available Formats:	Roll Lengths: Standard length 36 yds. <ul style="list-style-type: none"> • 2" to 4": up to 180 yds. • Wider widths available to 180 yds. • Dispensers available for purchase through 3M 	
	Sheets and Die-Cut parts: 3M can introduce you to fabricators with a background of handling this product and the capability to provide sheet goods and die cut dampers to customer specifications.	
	Custom Dispensers: Designed for manual or automatic operation, this custom dispenser removes protective liner from 3M™ Damping Foil 2552 before cutting to a predetermined length. Built to hold and dispense 6" core with a roll size up to 2" wide by 108 yds. Engineered for table top usage, this custom dispenser measures 31"L x 22"H x 10"W and weighs only 45 pounds.	

Characteristics

- Excellent aging qualities of the polymer.
- Wide temperature range for damping. Usable from -25° to 175°F (-32° to 80°C), with peak damping from 32° to 140°F (0° 60°C).
- Liner on product offers the user die-cut capability.
- Pressure sensitive adhesive for ease of application.
- Meets flame retardancy requirements of F.A.R. Part 25.853(a).
- Can pass ASTM E-162 and ASTM E-662 for flammability and smoke generation.

Application Ideas

- Industrial applications.
- Electronic equipment and appliances.
- Reduce resonant noise, vibration and fatigue in metal, plastic panels and support structures.
- Almost anywhere plastic or metal contact with materials can result in potentially damaging vibration.

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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.

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