

We have one goal — improving the noise and vibration quality of our customers' products. Roush delivers innovative, effective noise and vibration control products and solutions. By combining advanced analysis capabilities, comprehensive engineering services, and state-of-the-art facilities, Roush has become a proven partner in identifying and resolving challenging noise and vibration issues. Backed by the diverse capabilities of the Roush family of companies, we are uniquely equipped to provide turnkey noise and vibration solutions.

Roush... your silent partner in developing smoother, quieter products.

Damping Adhesive — RA990

Product Description

RA990 is an acrylic-based viscoelastic adhesive designed to have high damping performance at an elevated temperature range.

Features

RA990 damped viscoelastic adhesive offers superior damping performance over a wide temperature and frequency range with peak damping achieved from 80°F to 230°F for most applications. This material has excellent temperature resistance making it suitable for automotive underhood damping applications, such as engine cover components. The RA990 possesses a dry tack requiring moderate heat and pressure to be used in the bonding process.

RA990 can also be processed to achieve cleaner outgassing properties over generic acrylic adhesives for use in the computer/hard disk drive industries, either as a laminate or constrained layer damping product.

RA990 is very stable, resistant to UV exposure, thermal aging and humidity effects, and will maintain consistent performance over a long product life.

Typical Physical Properties

Adhesive	1 mil, 2 mil or custom
Release Liner.....	Available with variety of linear combinations
180° Peel Adhesion ¹ (ASTM D-3330 PSTC-1).....	3.0 lbs/in minimum after 15 minutes @ 150°F
Shear Adhesion ¹ @ 4 psi (PSTC-7)	24+ hrs. minimum
Temperature Range:	Adhesion for best results, adhesion should be performed at 250°F with pressure and time varying for different substrates
Damping @ 1000Hz	Excellent Damping from 80°F to 230°F
Water, Humidity and Solvent resistance	Excellent
Temperature Stability.....	Excellent
Outgassing:	
Typical Total Outgassing ² (Static Headspace GC/MS, ASTM D4526).....	2.5µg/cm ²
Organo-Tin Content ³	ND

Shelf Life: Two years when stored under cool, dry conditions out of direct sunlight (70°F, 50% RH)

- Note:** (1) 180° Peel Adhesion and Shear Adhesion values for 2 mil adhesive samples.
 (2) Samples for static outgassing are of 5 cm x 5 cm square of 5 mil adhesive applied to aluminum foil with release liners removed.
 (3) Samples digested in acid solution and metal analysis performed using ICP Mass Spectrometry.
 ND - None Detected. Levels detected are below measurement reporting limits.





NOISE AND
VIBRATION
CONTROL
PRODUCTS

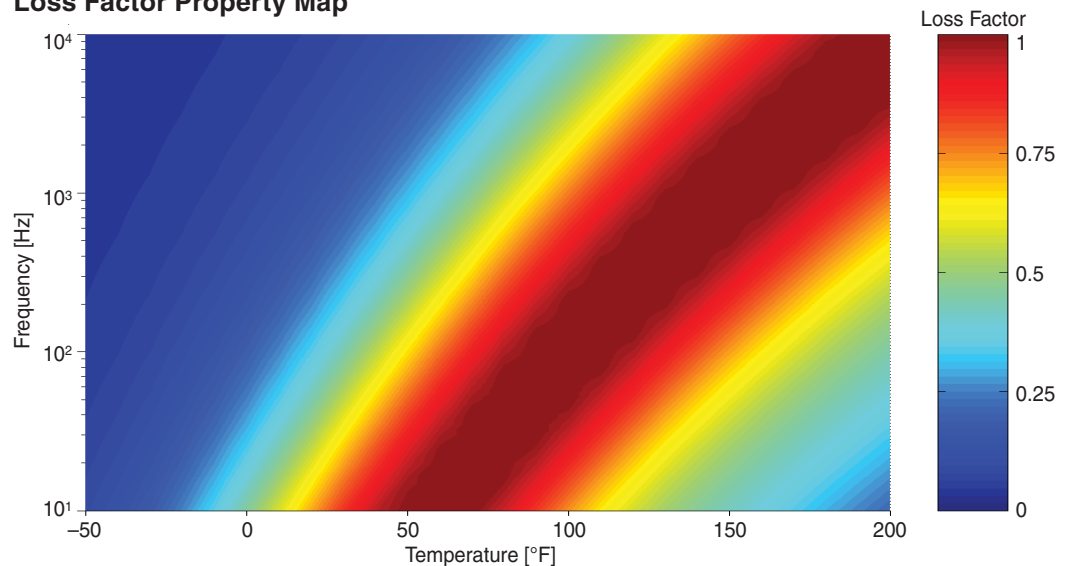
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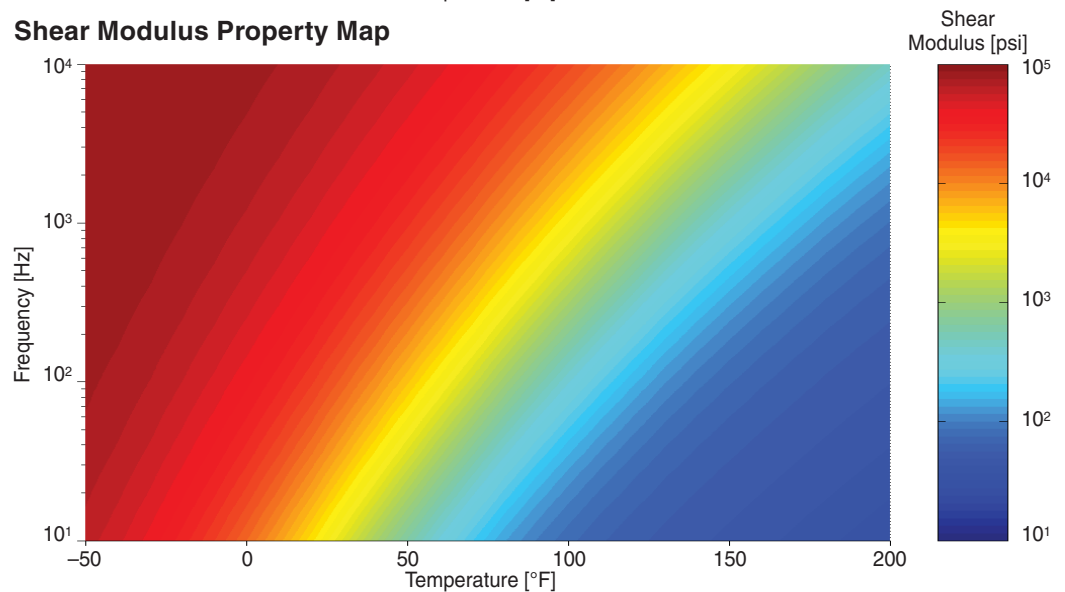
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RA990 — Dynamic Material Properties (ASTM E756 Test Results)

Loss Factor Property Map



Shear Modulus Property Map



Contact us for a Temperature-Frequency Nomogram.

Full Service Noise and Vibration Control Support

Let Roush assist you with your noise and vibration control activities. We offer a full range of design, engineering, testing, and manufacturing capabilities.

As an alternative to this material, we can search our database of over 3,000 materials to identify other potential material solutions. Once selected, Roush uses design and analyses to optimize the configuration of the material for your specific application.

Roush provides manufacturing operations to convert this material into a finished part that can be delivered to your specifications. Roush has many worldwide partners that provide a wide array of low cost manufacturing processes with high quality production output.

Contact us or visit our website at www.roushind.com/NVH for more detailed information on Roush's full-service capabilities.

Product Performance and Suitability:

All information regarding the use of Roush products identified in this datasheet is believed to be reliable by Roush, but are not product specifications and must only be used as a guide. Roush does not represent or warrant that its products are fit for a particular purpose or that they do not infringe any U.S. or foreign patents. Purchaser must independently determine the suitability of the Roush products for their particular application. Unless written otherwise in Roush's Terms and Conditions of Sale for the product, this datasheet or any verbal statements made by any other distributor, salesman or representative about the product will not be deemed to create an express warranty of any kind.