

ELASTOMER COMPARISON GUIDE

	E-A-R Highly Damped Materials					Other Common Materials					
	VersaDamp V-2590	ISODAMP	ISODAMP C-8002	ISOLOSS HD	ISOLOSS HDF	Other TPE	Urethane Thermoset	Butyl Rubber	Natural Rubber	Neoprene	Nitrile Rubber
Damping T max (dB)	7	3	3	4	4	15	4	8.6	23	20	18
Durometer Shore A	57	56,63,70	57	58	61	55	35	55	50	50	55
Resilience %	12	5.3	4	4.5	4.5	49	4.8	15.6	68	238	28.4
Tensile Strength PSI	653	1574, 1807, 2058	1150	1300	1348	674	225	786	1741	584	1103
Percent Elongation	344	459	754	424	424	396	400	335	776	675	669
Tear Strength	Good	Excellent	Good	Excellent	Excellent	Poor	Fair	Good	Excellent	Good	Good
Abrasion Resistance	Poor	Good	Poor	Excellent	Excellent	Poor	Poor	Good	Excellent	Good to Excellent	Excellent
Compression Set Resistance	Good	Fair	Fair	Excellent	Excellent	Good	Excellent	Fair	Good	Fair to Good	Good
Low Temperature Embrittlement Point	-70C	-20C	-12C	-27C	-27C	-70C	-50C	-50C	-80C	-45C	-85C
High Temperature Max Intermittent	125C	82C	80C	107C	107C	125C	82C	135C	121C	135C	125C
Heat Aging 100C	Excellent	Good to Excellent	Good	Fair to Good	Fair to Good	Excellent	Fair to Good	Excellent	Good	Good	Good
Flame resistance	UL 94 HB	UL 94 V-0	UL 94 V-0	UL 94 HB	UL 94 V-2	UL 94 HBF	Poor to Fair	Poor	Poor	Good	Poor to Fair
Typical Process Method	Injection Molding	Injection Molding	Injection Molding	Transfer Molding	Transfer Molding	Injection Molding	Reaction Mold or Cast	Compression Mold	Compression Mold	Compression Mold	Compression Mold
Bonding	Poor	Fair	Excellent	Good	Good	Poor	Fair to Good	Fair to Excellent	Excellent	Good to Excellent	Excellent
Weather	Excellent	Good to Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fair	Excellent	Good
Oxidation	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good	Fair to Good
Resistance Data	Ozone	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Poor	Excellent	Poor
	Water	Good	Excellent	Excellent	Good	Good	Good	Excellent	Excellent	Good	Excellent
	Acid	Excellent	Excellent	Good	Good	Good	Excellent	Poor to Fair	Excellent	Fair to Good	Good
	Alkali	Excellent	Good	Good	Good	Good	Excellent	Poor to Fair	Excellent	Fair to Good	Good
Gasoline, Kerosene, Etc. (Aliphatic Hydrocarbons)	Poor	Good	Poor	Excellent	Excellent	Poor	Excellent	Poor	Poor	Good	Excellent
Benzol, Toluol, Etc. (Aromatic Hydrocarbons)	Poor	Fair	Poor	Poor	Poor	Poor	Poor to Fair	Fair to Good	Poor	Poor	Good
Alcohol	Good	Poor	Good	Fair	Fair	Good	Good	Excellent	Good	Fair	Excellent
Degreaser Solvents (Halogenated Hydrocarbons)	Poor	Fair to Poor	Poor	Fair to Poor	Fair to Poor	Poor	Fair to Poor	Poor	Poor	Poor	Poor

PUT E-A-R ON YOUR DESIGN TEAM

Incorporating preventive measures early in a product's development process can help sidestep unwanted noise and vibration, as well as disruptive and destructive shock energy that can affect marketability. It also can prevent the need to re-engineer, redesign or retool. Retrofitting is rarely as cost-effective as designed-in controls, and may be much more costly to implement in the long run.

E-A-R engineers and technicians routinely consult with product designers about materials selection, design configurations, potential problems and other critical noise, vibration and shock issues while the design is still on the drawing board. We don't supply just materials. We offer our technical expertise, applications experience and testing capabilities as well.

Assistance from an E-A-R applications engineer may entail a quick phone call, complete in-house lab diagnosis or even a visit to the customer's site. Our NOVICON lab can effectively diagnose problems and validate our proposed solutions, utilizing state-of-the-art diagnostic and analytical tools. Vibration shakers, drop shock tables, high-speed video and a hemi-anechoic chamber are just a few of the tools commonly used.

E-A-R also utilizes the latest 3D solid modeling CAD systems—ProE, CATIA, SolidWorks and SDRC-Ideas—to examine a customer's product during the design stage and to develop custom solutions. Electronic transfer of large files is available through our Websites.

The data listed in this guide are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.



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