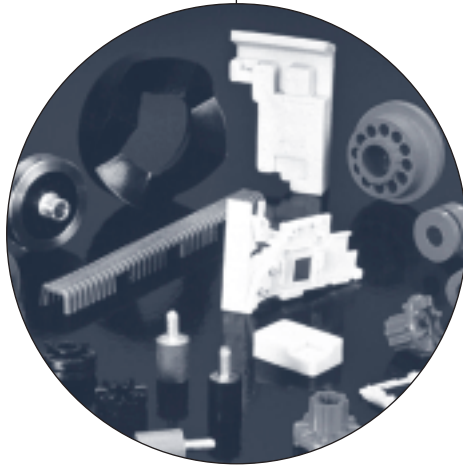


# Molding Materials / Custom Parts



**For custom-** engineered parts to control noise, vibration or shock, E-A-R offers numerous moldable thermoplastic and thermoset materials to choose from.

**Thermoplastics: ISODAMP C-1000 Series Thermoplastics** are highly damped vinyl materials that exhibit extremely low amplification at resonance and quick return to system equilibrium after shock input. C-1000 Series materials are soft and pliable, yet physically strong and wear-resistant. The three formulations are engineered to perform in discrete temperature ranges: ISODAMP C-1002 from 13C to 41C (55F to 105F); C-1105 from 27C to 54C (80F to 130F); and C-1100 from 35C to 63C (95F to 145F).

**ISODAMP C-8000 Series Thermoplastics** are highly damped elastomers that provide the same benefits of the C-1000 series materials in a non-PVC formulation. They are also formulated to be environmentally clean; providing excellent flammability performance (UL 94 V-0) without halogens, silicones or metal oxides. This unique family of elastomers will meet most of the emerging environmentally “green” initiatives and specifications. ISODAMP C-8000 materials have a peak performance temperature range of 17C to 41C (62F to 105F).

**Thermoplastic Elastomers (TPEs): VersaDamp 2000 Series TPEs** are olefinic dynamic vulcanizates. They are usually selected to optimize damping performance or durometer or both. The materials eliminate the need to make tradeoffs in damping and operating temperature range. They feature durometers ranging from 40 Shore A to 74 Shore A, and they have widely varying energy control capabilities.

**Thermosets: ISOLOSS HD Elastomers** exhibit excellent load bearing strength, compression-set resistance and stiffness stability over a broad temperature range. With a recommended maximum continuous operating temperature of 90C (195F), the materials can withstand intermittent exposure as high as 107C (225F). Designed specifically for use in metal-bonded elastomeric mounts, these elastomers exhibit excellent environmental-resistance properties.

**ISOLOSS VL Elastomers** combine extremely low modulus and good damping performance with stable material properties and strength throughout a useful temperature range of 0C to 32C (32F to 90F). VL molded parts maintain a stable natural frequency and effectively damp system resonances despite wide shifts in temperature.

## Typical Properties

Property	ISODAMP C-1002	ISODAMP C-1105	ISODAMP C-1100	ISODAMP C-8002	VersaDamp V-2325	VersaDamp V-2590	VersaDamp V-2725	ISOLOSS HD	ISOLOSS VL
<b>Description</b>	Vinyl Solid	Vinyl Solid	Vinyl Solid	TPE Solid	TPE Solid	TPE Solid	TPE Solid	Urethane Solid	Urethane Solid
<b>Typical Process Method</b>	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Transfer/Compression Mold	Transfer/Compression Mold
<b>Peak Transmissibility at Resonance (dB)</b>	3	3	3	3	13	7	11	3	6
<b>Hardness Nominal</b> ASTM D2240 15 sec impact at 23C (73F) Shore A Durometer	56	63	70	56	40	57	74	58	24
<b>Bashore Resilience 1st Rebound (%)</b>	4.8	5.4	5.7	4.0	40	12.0	35	4.5	23.0
<b>Tensile Strength (psi)</b>	1574	1807	2058	1150	380	653	976	1300	256
<b>Elongation (%)</b>	459	417	317	750	278	344	381	424	900
<b>Post Compression Recovery (%)</b> at 20C (68F)	86	77	76	82	90	85	80	96	96
<b>Resistance to:</b>									
Ozone	Good	Good	Good	Good	Good	Good	Good	Good	Good
Water	Good	Good	Good	Good	Good	Good	Good	Good	Good
UV	Good	Good	Good	Fair	Good	Good	Good	Good	Good
Kerosene	Fair	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor

See material summary sheets for more data and testing method information. 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.