# MOLDING MATERIALS – THERMOPLASTICS

Material Summary Sheet 7

**Offering solutions for a wide range of applications such as...**

- Lab and office equipment
- Computers and peripherals
- Industrial equipment

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## Molding Materials – Thermoplastics

E-A-R's proprietary, highly damped ISODAMP™ thermoplastic and VersaDamp™ thermoplastic molding materials are standard- and custom-molded to provide high performance shock, vibration and noise control.

As highly damped elastomers, these materials platforms exhibit extremely low rebound characteristics, ensuring very low amplification at resonance and rapid settling to equilibrium after shock or vibration input.

Standard and custom configurations include numerous styles of isolation grommets (with or without metal inserts), bushings, mounting pads and feet, self-locking fan mounts, snubbers, gaskets, bumpers and pads.

**TYPICAL PROPERTIES**

| PROPERTY | C-1002 | C-1100 | C-8002 | C-8012 | C-8070 | C-8130 |
|---|---|---|---|---|---|---|
| ***Description*** | Vinyl Solid Thermoplastic | Vinyl Solid Thermoplastic | TPE Solid Thermoplastic | TPE Solid Thermoplastic | TPE Solid Thermoplastic | TPE Solid Thermoplastic |
| **Hardness**<br>ASTM D2240<br>Type A Durometer 23C (73F)<br>15 sec impact | 54 | 71 | 51 | 40 | 70 | 88 |
| **Flammability**<br>UL 94 1.5 mm (0.06 in thick)<br>3.2 mm (0.125 in) | Listed V-0 | Listed V-0 | Listed V-0 @ 3.4 mm (0.13in) | Listed V-0 @ 6 mm (0.24in) | Meets V-0 @ 3.2 mm (0.125 in) | Listed V-0 @ 3.5 mm (0.14 in) |
| FMVSS-302 | | | | | | |
| **Compression Load Deflection kPa (psi)**<br>ASTM D575 at 0.51 cm/min (0.2 in/min)<br>10% kPa (psi)<br>20% kPa (psi)<br>30% kPa (psi) | <br><br>393 (57)<br>1145 (166)<br>2468 (358) | <br><br>1172 (170)<br>3688 (535)<br>7756 (1125) | <br><br>455 (66)<br>883 (128)<br>1358 (197) | <br><br>324 (47)<br>627 (91)<br>958 (139) | <br><br>951 (138)<br>1799 (261)<br>2799 (406) | <br><br>2495 (362)<br>6494 (942)<br>9087 (1318) |
| **Compression Set (%)**<br>ASTM D395 Method B<br>22 hr at 22C (72F)<br>22 hr at 70C (158F) *50C(122F) | <br>14<br>62 | <br>25<br>60 | <br>15<br>99 | <br>12<br>100 | <br>15<br>98 | <br>35<br>90 |
| **Tensile Strength kPa (psi)**<br>ASTM D412 | 8963 (1300) | 13789 (2000) | 5309 (770) | 3309 (480) | 10059 (1459) | 11279 (1636) |
| **Tear Strength kN/m (lbf/in)**<br>ASTM D624 | 40 (224) | 65 (370) | 25 (141) | 18 (100) | 50 (285) | 72 (410) |
| **Temperature Range C (F)**<br>Peak Damping Performance Temperature Range<br>ASTM D4065 Loss Factor above 0.3% strain in shear mode at 10 Hz | -13C to 37C (9F to 99F) | 3C to 56C (37F to 132F) | -4C to 40C (-25F to 104F) | -22C to 21C (-8F to 70F) | 4C to 42C (42F to 86F) | 6C to 30C (42F to 86F) |

*The data listed in this data sheet 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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