

## Sorbothane Polyurethane Damping Material, 50 Durometer

Category : Polymer , Thermoset , Polyurethane, TS , Thermoset Polyurethane, Elastomer, Unreinforced , Rubber or Thermoset Elastomer (TSE)

### Material Notes:

Sorbothane® is a thermoset, polyether-based polyurethane viscoelastic material that combines high energy absorption with faultless memory. Sorbothane turns mechanical energy into heat. As the material is deformed, the friction created at the molecular level is generated into heat. High hysteresis is then formed. The energy is moved perpendicularly away from its original plane and is pushed close to 90° out of phase from its original disturbing force. Sorbothane is used in shock/vibration mounts, stud mounts, and grommets/bushings in diverse fields such as electronics/audio equipment, noise abatement, insoles, protective sports gear, and anti-vibration gloves and wraps. Information provided by Sorbothane Inc

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Sorbothane-Polyurethane-Damping-Material-50-Durometer.php](http://www.lookpolymers.com/polymer_Sorbothane-Polyurethane-Damping-Material-50-Durometer.php)

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	0.860 MPa	125 psi	500 mm/min; ASTM D412 80
Tensile Strength, Yield	0.190 MPa @Strain 100 %	27.6 psi @Strain 100 %	ASTM D412 80
Elongation at Break	500 %	500 %	500 mm/min; ASTM D412 80
Compressive Yield Strength	0.610 MPa	88.5 psi	50% strain; ASTM D575 Method A
Resilience	13.2	13.2	Lupke rebound test
Coefficient of Friction	2.6	2.6	on polished steel; ASTM D1894
Coefficient of Friction, Static	10.4	10.4	on polished steel; ASTM D1894
Tear Strength Test	23.5	23.5	psi per ASTM 624 with 1 mm nick
Compression Set	6.2 %	6.2 %	72 hr/73°F/25% compression - ASTM 395

Thermal Properties	Metric	English	Comments
CTE, linear	132 Åµm/m-Å°C @Temperature -50.0 - 100 Å°C	73.3 Åµin/in-Å°F @Temperature -58.0 - 212 Å°F	
Thermal Conductivity	0.380 W/m-K	2.64 BTU-in/hr-ftÅ²-Å°F	estimated from other durometer grades
Maximum Service Temperature, Air	<= 82.0 Å°C	<= 180 Å°F	Optimum performance range

Thermal Properties	Metric	English	Comments
Minimum Service Temperature, Air	-43.0 °C	-45.4 °F	optimum performance range
Glass Transition Temp, Tg	-43.0 °C	-45.4 °F	
Flammability, UL94	V-2	V-2	

**Contact Songhan Plastic Technology Co.,Ltd.**

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