Polymer Technologies Inc.
Engineering Sound Solutions®

Technical Data Sheet
Materials Specifications For:
EDPV0
POLYDAMP® V0 Damping Sheet

Description: POLYDAMP® V0 Damping Sheet is a flexible extensional damping material available in sheets and custom die-cut parts. It is ideal for controlling vibration and noise in products whose surfaces are at or near resonance during their normal operating cycle, such as electrical appliances, medical and dental equipment, office and electronic data processing equipment, industrial, construction, over and off-highway transportation vehicles.

Important Features:
*Maintains maximum damping over a broad frequency range, at room temperature 21°C (70°F) and useful damping from 10°C to 50°C (50°F to 120°F)
*Flexible, easy to fabricate and apply.
*Meets flammability requirements of UL 94 V-O, ASTM E84 Flame 25 max, FAR 25.853(b), and MVSS-302.
*Resistant to aqueous solutions, petro-chemical products, and common industrial fluids.
*Available in composite form with acoustic quality foams.
*Supplied with "Peel and Stick" pressure sensitive adhesive.

Typical Characteristics:

Chemical Type:	Filled vinyl copolymer
Color:	Dark Gray
Size, mm (in.):	Standard 610 (24) by 1372 (54), & 1372 (54) by 1829 (72)
Thicknesses, mm (in):	Standard 1.3 (0.050); Optional: 0.9 (0.035), 2.9 (0.115)
Weight @.050",kg/m^2 (lb/ft.^{2}):	1.95 (0.40)
Tensile N/M^2(lb/ft.^{2}):	2.7 X 10.6 (400), per ASTM D 638
Service Temperature Range:	Damping Performance - 0°C (32°F) to 82°C (180°F) Upper Temperature Limit: 100°C (212°F) (material begins to soften at 93°C (200°F)
Flame Resistance*:	Meets UL component classification 94 V-0, ASTM E84 Flame Spread 25, FAR 25.853(b) Vertical Flame Test, and MVSS-302.

Chemical Resistance:
Percent change in weight after 3 weeks immersion (of 1" x 2" x 0.050 samples) at 22°C (72°F) in the following fluids: Tap Water, 10% soap solution, 10% common salt, 5% NaOH, ethylene glycol, motor oil SAE-30, hydraulic oil (Mobile) less than +2.0%, 7% ammonia + 5.0, Isopropanol - 4.1, gasoline - 8.6, Toluene -15.7

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Electrical Resistance: Volume Resistivity: 4.0×10^{13} Ohm/cm per ASTM D 257
Surface Resistivity: 8.0×10^{14} Ohm per ASTM D 257

Damping Properties:

TEST:

Composite loss factor for 0.050" thick EDPVO on various thicknesses of steel at 200 Hz, measured according to ASTM E-756.

LOSS FACTOR AT TEMPERATURE DEGREE F

Steel Thickness	0	30	45	60	90	120
.0478"	.042	.085	.087	.07	.038	.016
.0359"	.055	.13	.14	.11	.055	.021
.0299"	.065	.17	.19	.165	.075	.029

TEST:

Composite Loss Factor for 0.115" thick EDPVO on various thicknesses of steel at 200 Hz, measured according to ASTM E-756.

LOSS FACTOR AT TEMPERATURE DEGREE F

Steel Thickness	0	30	45	60	90	120
.1046"	.17	.19	.15	.11	.038	.012
.0747"	.14	.20	.18	.14	.052	.018
.0598"	.11	.21	.20	.17	.069	.023