

Rogers Corporation Poron® 4790-92-15 Supported Urethane Foam, Extra Soft, Slow Rebound, PET Reinforced

Category : Polymer , Thermoset , Polyurethane, TS , Thermoset Polyurethane Foam, Unreinforced

Material Notes:

Extra soft, slow rebound with a very low closure force. Features and Benefits of PORON Products: Excellent compression set resistance which enables durable, long-term performance for gasketing, sealing, and cushioning. Low-outgassing and non-fogging, containing no plasticizers or residual chemicals to contaminate the device. The material will not become brittle and crumble and is non-corrosive to metal. Inherently flame retardant without the use of additives. Many of the materials meet flammability requirements of UL HBF and MVSS 302. Engineered urethane formulations offering a wide modulus range - 2-90 psi @ 25% deflection – for more design versatility requirements. Good chemical resistance. Easy to fabricate, die-cuts cleanly and works with a broad range of adhesives. Broad range of formulas and thicknesses from 0.039" to 0.120" (1.0 mm to 3.05 mm). Applications:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Rogers-Corporation-Poron-4790-92-15-Supported-Urethane-Foam-Extra-Soft-Slow-Rebound-PET-Reinforced.php

Physical Properties	Metric	English	Comments
Density	0.240 g/cc	0.00868 lb/in ³	ASTM D3574-95 Test A
	1.395 g/cc	0.05040 lb/in ³	supporting material; ASTM D1505
Water Absorption	25 %	25 %	Immersion; ASTM D570-95
Moisture Absorption at Equilibrium	2.0 %	2.0 %	High Humidity; AMS 3568-95
Thickness	991 - 3050 microns	39.0 - 120 mil	Range of Thicknesses Available
Outgassing - Total Mass Loss	0.14 %	0.14 %	CVCM; at 7000 Pa; ASTM E595-93
	@Temperature 125 °C, Time 86400 sec	@Temperature 257 °F, Time 24.0 hour	
	0.71 %	0.71 %	WVR; at 7000 Pa; ASTM E595-93
	@Temperature 125 °C, Time 86400 sec	@Temperature 257 °F, Time 24.0 hour	
	1.73 %	1.73 %	TML; at 7000 Pa; ASTM E595-93
	@Temperature 125 °C, Time 86400 sec	@Temperature 257 °F, Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Hardness, Shore O	2.0	2.0	ASTM D2240-97
Tensile Strength	207 MPa	30000 psi	MD, supporting material; ASTM D882
Tensile Strength, Yield	103 MPa	15000 psi	F5, supporting material; ASTM D882

Elongation at Break Mechanical Properties	150 % Metric	150 % English	supporting material; ASTM D882 Comments
Tensile Modulus	3.45 GPa	500 ksi	MD, supporting material; ASTM D882
Compressive Yield Strength	0.0117 MPa	1.70 psi	Typical value, 0.2"/min. strain rate
	@Strain 25.0 %	@Strain 25.0 %	
	0.00207 - 0.0241 MPa	0.300 - 3.50 psi	Range, 0.2"/min. strain rate
	@Strain 25.0 %	@Strain 25.0 %	
Coefficient of Friction, Dynamic	0.40	0.40	A/B, supporting material; ASTM D1894
Compression Set	2.0 %	2.0 %	ASTM D1667-90 Test D
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10 %	10 %	ASTM D3574-95 Test D
	@Temperature 70.0 °C	@Temperature 158 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	230 - 310 µm/m-°C	128 - 172 µin/in-°F	
Thermal Conductivity	0.830 W/m-K	5.76 BTU-in/hr-ft²-°F	ASTM C518-98
Maximum Service Temperature, Air	70.0 °C	158 °F	Constant use; SAE J-2236
	121 °C	250 °F	Intermittent use; ASTM D746-98
Brittleness Temperature	-20.0 °C	-4.00 °F	ASTM D746-98
Shrinkage, MD	1.2 %	1.2 %	supporting material
	@Temperature 150 °C, Time 2340 sec	@Temperature 302 °F, Time 0.650 hour	
Shrinkage, TD	0.00 %	0.00 %	supporting material
	@Temperature 150 °C, Time 2340 sec	@Temperature 302 °F, Time 0.650 hour	

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+11 ohm-cm	8.00e+11 ohm-cm	ASTM D257-99
Dielectric Constant	1.48	1.48	50% RH; ASTM D150
	@Time 86400 sec	@Time 24.0 hour	
Dielectric Strength	1.97 kV/mm	50.0 kV/in	ASTM D149-97a
Dissipation Factor	0.040	0.040	ASTM D150-98

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