

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

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

Material Notes:

Extra soft, slow rebound with a very low closure force. Standard available thickness range from 0.021" to 0.500" (0.53 mm to 12.7 mm). 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 0.012" to 0.500" (0.43mm to 12.7mm). Applications:

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	0.240 g/cc	0.00868 lb/in ³	ASTM D3574-95 Test A
Water Absorption	34 %	34 %	Immersion; ASTM D570-95
Moisture Absorption at Equilibrium	2.0 %	2.0 %	High Humidity; AMS 3568-95
Thickness	3180 - 12700 microns	125 - 500 mil	Range of Thicknesses Available
Outgassing - Total Mass Loss	0.14 %	0.14 %	CVCM; ASTM E595-93
	0.71 %	0.71 %	WVR; ASTM E595-93
	1.73 %	1.73 %	TML; ASTM E595-93

Mechanical Properties	Metric	English	Comments
Hardness, Shore O	<= 5.0	<= 5.0	ASTM D2240-97
Tensile Strength	>= 0.103 MPa	>= 15.0 psi	ASTM D3574-75 Test E
	0.207 MPa	30.0 psi	Typical; ASTM D3574-75 Test E
Elongation at Break	>= 120 %	>= 120 %	ASTM D3574-75 Test E
	206 %	206 %	Typical; ASTM D3574-75 Test E
Compressive Yield Strength	0.00207 - 0.0241 MPa	0.300 - 3.50 psi	Range, 0.2"/min. strain rate
	@Strain 25.0 %	@Strain 25.0 %	
	0.0138 MPa	2.00 psi	

Mechanical Properties	Metric @Strain 25.0 %	English @Strain 25.0 %	Typical value, 0.2"/min. strain rate Comments
Tear Strength	>= 0.700 kN/m	>= 3.99 pli	ASTM D264-91 Die C
	0.900 kN/m	5.14 pli	Typical; ASTM D264-91 Die C
Compression Set	2.0 % @Temperature 23.0 °C	2.0 % @Temperature 73.4 °F	ASTM D1667-90 Test D
	5.0 % @Temperature 121 °C	5.0 % @Temperature 250 °F	autoclaved 5 hrs; ASTM D3574-95 J/Test D
	10 % @Temperature 70.0 °C	10 % @Temperature 158 °F	ASTM D3574-95 Test D

Thermal Properties	Metric	English	Comments
CTE, linear	230 - 310 µm/m-°C	128 - 172 µin/in-°F	
Maximum Service Temperature, Air	90.0 °C	194 °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

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

Descriptive Properties	Value	Comments
Flammability Test	pass	MVSS 302; 0.118 in.
	pass	CSA Comp HBF (File 188149); 0.118 in.

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