

PORON Medical® Urethanes

PORON Medical[®] Urethanes - Soft Cushioning and Soft Supporting Materials

PORON Medical® cellular urethanes are engineered, medium density, microcellular (cells are roughly 100 microns in diameter) foam materials. They are used in orthopedic and prosthetic applications, including custom orthotics, custom prefabricated orthotics, prosthetic padding and other biomechanical supports.

- Long-term Comfort
- Compression-set Resistance
- Open Cell Breathable
- Microcellular Structure
- Fungal Resistant

PORON® - Soft Supporting materials have a density of 20 pounds per cubic foot, and are available in thicknesses from 1/16 inch (1.5mm) up to 1/2 inch (12.7mm).

PORON - Soft Cushioning materials have a density of 15 pounds per cubic foot, and are available in thicknesses from 1/8 inch (3mm) up to 1/2 inch (12.7mm).



Sample

0%

Other combinations are also available upon special order. Ask a Rogers Customer Service Representative for details:



U.S.A. 860.928.3622 • Europe +32.9.235.36.11 • Asia +886.2.8660.9056

Continued on reverse

24250

The information contained in this data sheet is intended to assist you in designing with Rogers PORON Medical Urethanes. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the data sheet will be achieved by a user for a particular purpose. The user is responsible for determining the suitability of Rogers PORON Medical Urethanes for each application.

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PORON Medical[®] Urethanes – Soft-Cushioning - Soft-Supporting Materials Typical Physical Properties

PROPERTY	TEST METHOD	PRODUCT	
Formulation		PORON MS	PORON MS
		Soft - Cushioning	Soft - Supporting
Standard Thickness		See Product Availability	
Tolerance, %		± 10	
Standard Width, mm (inch)		1372 (54)	
Standard Colors (Codes)		Neutral (05), Aquamarine (72)	Beige (40), Light Blue (14) Onyx (89)
Density, kg/m³ (lb/ ft³)	ASTM D 3574	240 (15)	320 (20)
Specific Gravity		0.240	0.320
Tolerance, %		±	10
Compression Set, % max.	ASTM D 3574 @ 70°C (158°F)	10	
Compression Force Deflection,	ASTM D 3574	28 - 55	41 - 97
kPa (psi)	@ 25% Deflection	(4 - 8)	(6 - 14)
Hardness, Durometer	Shore "OO"	52	60
Resilience, Shore Instrument Resiliometer, Typical (Ball Rebound Tester)	ASTM D 2632, Vertical Rebound	24	25
Tear Strength, kN/m (pli), min.	ASTM D 624	0.5 (3)	0.9 (5)
Elongation, % min.	ASTM D 3574	100	
Tensile Strength, kPa (psi), min.	ASTM D 3574	276 (40)	517 (75)
Antimicrobial, Fungal Resistance	ASTM G 21	Does not promote fungal growth	
Surface Contact - Medical Device			
Primary Skin Irritation	ISO10993* / FDA G95	Pass	
Cytotoxicity	ISO10993* / FDA G95	Pass	
Maximization and Sensitization	ISU10993^ / FDA G95	Pass Open Cell Breathable	
	Guney Porosity Meter		
g/m²/24hrs (g/ft²/24hrs)	Based on ASTM E 96	200 (19)	
Water Absorption, Typical % Wt Gain	Based on ASTM D 570	< 20	
Chemical Resistance		PORON Urethanes are unaffected by mild organic acids and bases. They show modest swelling with oils and greases and other linear hydrocarbons. Strongly polar solvents will greatly swell PORON Urethanes. In most cases, physical properties recover to a great extent as the solvents evaporate.	
Stain Resistance	ASTM D 925	No Stain	
Additional Solvent Resistance	Soap and Water 50/50	No tackiness or surface deterioration	
Temperature Resistance, max. Recommended Constant Use	SAE J-2236	90°C (194°F)	
Hydrolysis Resistance.	ASTM D 3574 Test J / Test D		
Tensile Strength, kPa (psi)	after autoclaved 5 hrs		
Compression Set, % max.	@ 121°C (250°F)	Good Resistance, 5	

* ISO 10993 certifications are specific to colors and density. Consult ISO 10993-1:2003(E) Guidelines for further detail.

Notes: 1. All metric conversions are approximate.

2. Additional technical services are available.

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