ROGERS CORPORATION

PORON® Performance Cushioning

SRP
847-593-5630
www.srpco.com

PORON® XRD™ Extreme Impact Protection – Physical Properties

PROPERTY	TEST METHOD	PRODUCT				
***Density**, lb./ft³	ASTM D 3574-95 Test A	9	12	15	20	25
Specific Gravity		0.14	0.19	0.24	0.32	0.40
Tolerance, %		± 10				
***Standard Thickness**		See Product Availability				
Tolerance, %		± 10				
Standard Color		65 - Vivid Yellow				
Air Permeability	Internal using Gurley Densometer	Open Cell - Breathable				
***Compression Set**, % max.	ASTM D 3574 Test D @ 158°F (70°C)	< 10				
***Compression Force Deflection**, psi, kPa)	0.2"/min. Strain Rate Force Measured @ 25% Deflection	1.1 - 3.4 (8 - 23)	1.5 – 5.5 (10 - 38)	4 – 9 (28 – 62)	5 – 12 (34 – 83)	10 – 20 (69 – 138)
Hardness, Durometer	Shore "O"	10	19	32	**	
Hydrolysis Resistance, Compression Set, % Max	ASTM D 3574 Test J / Test D after autoclaved 5 hrs @ 250°F (121°C)	**				
Resilience, Shore Instrument Resiliometer, avg (Ball Rebound Tester)	ASTM D 2632-96, Vertical Rebound	**				
Water Vapor Transfer, Typical g/ft²/24hrs (g/m²/24hrs)	Sample Thickness, inches (mm)	0.158 (4.0)	0.118 (3.0)	0.118 (3.0)	**	
	Based on ASTM E96-00 Upright / 37°C / 0% RH	4150	3400	3100	**	
	Leakage – Inverted	Yes	Yes	Yes	**	
Water Absorption, % Wt Gain	Based on ASTM D 570 – 2hr water immersion @ room temperature	Typical Value 10				
Skin Contact	Primary Skin Irritation – FHSA. Based on ISO 10993-10 (2002), ISO 10993-12 (2007), ISO/IEC 17025 (2005)	Negligible Irritant. Primary Irritation Index = 0				
Tear Strength, pli, min. (kN/m)	ASTM D 624 Die C	4.5 (0.8)	5 (0.9)	5 (0.9)	10 (1.8)	14 (2.5)
***Tensile Elongation**, % min.	ASTM D 3574 Test E	> 145				
***Tensile Strength**, psi, min. (kPa)	ASTM D 3574 Test E	30 (207)	45 (310)	70 (483)	100 (689)	140 (965)
Restricted Substances Compliance	Based on Adidas-Salomon policy for control and monitoring of hazardous substances.	Pass				
Chemical Resistance		*PORON Cushioning Materials 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 Materials. In most cases, physical properties recover to a great extent as the solvents evaporate.*				

Notes:
1. All metric conversions are approximate.
2. Additional technical services are available.
3. Information listed based on typical physical properties.
4. * Standard testing property; Certificate of Compliance available per lot.
5. ** Indicates testing in progress to confirm reported results.

The information contained in this Data Sheet is intended to assist you in designing with Rogers' PORON XRD Extreme Impact Protection and should not be used to create a specification. The data expressed 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 described or shown on the Data Sheet will be achieved by a user for a particular purpose. Each user must develop its own design and should determine the suitability of Rogers' products for that design.

WARNING: No impact absorbing material can prevent all injuries that may occur when the body is subjected to impact. Rogers makes no representation or warranty that PORON XRD Extreme Impact Protection will prevent such injuries. The user of protective gear containing Rogers' materials should be aware of the limitations of the gear and should exercise reasonable care and caution in the undertaking of activities that may result in impact to the body.