


Microcellular Polyurethane
U1S15

Typical Physical Properties

PROPERTY	TEST METHOD	VALUE
PHYSICAL		
Density, lb./ft ³ (kg/m ³) Tolerance, %	ASTM D3574 (1,5)	15.0 (240.28) ± 5
Thickness, inches (mm) Tolerance, %	(6,7)	0.093 - 0.500 (2.4 - 12.7) ± 10
Standard Color (Pantone® code)	-	Black (0426)
Compression Force Deflection, psi (kPa) Typical psi (kPa)	ASTM D3489 (1,5,6) at 25% compression	1 - 5 (7 - 35) 2.5 (17)
Compression Set, % max. (Typical)	ASTM D3574 Test D (1,3) at 50% compression, 73°F (23°C)	4 (0.6)
	ASTM D3574 Test D (1,3) at 50% compression, 158°F (70°C)	10 (2.6)
	ASTM D3574 Test J2 & Test D (1,3,4) Autoclave then 50% compression, 158°F (70°C)	5 (1.7)
Dimensional Stability, % max. change (Typical)	24 hr at 194°F (90°C)	5 (0.3)
Tensile Strength, min. psi (kPa) Typical psi (kPa)	ASTM D3574 Test E Die A (5,6)	25 (172) 35 (241)
Tensile Elongation, % min. Typical	ASTM D3574 Test E Die A (2)	125 155
Tear Strength, min. pli (kN/m) Typical pli (kN/m)	ASTM D624 Die C (5,6)	2 (0.3) 6 (1.1)
Resilience (Ball Rebound), %	ASTM D3574 Test H	26
TEMPERATURE RESISTANCE		
Continuous Use Range	SAE-J-2236	-40° to 225°F (107°C)
Intermittent Use Maximum	-	250°F (121°C)
Low Temperature Flex	24 hr at -40°, mandrel diameter = 1 inch	No Cracking

U1S15
Typical Physical Properties

PROPERTY	TEST METHOD	VALUE
FLAMMABILITY AND OUTGASSING		
Flammability	FMVSS-302	Pass
	ISO 3795	Pass
Fogging (gloss), reflectivity visual	SAE J1756 3 hr at 194°F (90°C)	99 Dry deposits
ENVIRONMENTAL		
Staining, visual	ASTM D925	No Staining
Solvent Resistance, visual	Immerse in: light naphtha naphtha trichloroethylene 50/50 mix antifreeze & water windshield washer solution electrical grease 50/50 mix soap & water aliphatic hydrocarbon with emulsifier	No Change, except swelling with trichloroethylene
Gasketing and Sealing	UL50/508 JMST2	Pass

- (1) Sample size is 1.5 inch diameter by approximately 0.5 inch stack height
- (2) Based on grip separation
- (3) Ct method, percent of original thickness
- (4) Autoclaved for 5 hours at 250°F then test D
- (5) Based on internal testing, samples to be submitted for official certification
- (6) All metric conversions are approximate
- (7) ASTM D3574 method with the following exceptions: 1.5 inch diameter foot on digital thickness indicator with a force loading of 0.9 Newtons (91.8 grams-force) plus the 30 gram weight of the foot

NOTE: Information of a technical nature is based on laboratory tests which either GRISWOLD LLC conducts or sends to an independent laboratory for testing for determination of uses as requested in writing by customer. GRISWOLD LLC believes these to be reliable. However, GRISWOLD LLC has no control over the application of the material to, or part of, the final **product** and **therefore**, GRISWOLD LLC makes **no express or implied warranty of result, fitness or merchantability**. The customer should determine reliability for the end use or particular application.

10/06/2017 AJ III

Page 2 of 2