


**Microcellular Polyurethane**
**U7R12**

 Cast on 2 mil PET film  
 Typical Physical Properties

PROPERTY	TEST METHOD	VALUE
<b>PHYSICAL</b>		
Density, lb./ft <sup>3</sup> (kg/m <sup>3</sup> ) Tolerance, %	ASTM D3574 (1,2)	15 (240) ± 10
Thickness, inch (mm) Tolerance, %	(2,5)	0.020 - 0.081 (0.51 - 2.06) ± 15 (<0.035), ± 10 (>0.035)
Standard Color (Pantone® code)	-	Black ( <b>0426</b> )
Compression Force Deflection, psi (kPa) Typical psi	TA.XT.Plus Texture Analyser (3) at 25% compression	0.8 - 2.4 (5.5 - 16.5) <b>1.7</b>
Compression Set, % max. (Typical)	ASTM D3574 Test D (1,4) at 50% compression, 73°F (23°C)	<b>5 (0.5)</b>
	ASTM D3574 Test D (1,4) at 50% compression, 158°F (70°C)	<b>10 (1.7)</b>
<b>ELECTRICAL AND THERMAL</b>		
Dielectric Constant, K'	ASTM D 150-98	2.80
Dissipation Factor, tan D	ASTM D 150-98	0.16
Dielectric Strength, volts/mil	ASTM D149-09	42
Volume Resistivity, ohm-cm	ASTM D 257-07	9.93 x 10 <sup>10</sup>
Surface Resistivity, ohms/square	ASTM D 257-07	9.68 x 10 <sup>12</sup>
Coefficient of Thermal Expansion, in/in/°C	ASTM E 831-06	2.45 x 10 <sup>-4</sup>
<b>TEMPERATURE RESISTANCE</b>		
Continuous Maximum Use	-	158°F (70°C)
Intermittent Use Maximum	-	250°F (121°C)
Low Temperature Flex	22 hr at -40°, mandrel diameter = 1 inch	No Cracking

The data reported above is for foam only. The table on page 2 shows typical physical property data for the PET film as reported by the manufacturer.

**U7R12**
**Cast on 2 mil PET film  
Typical Physical Properties**

PROPERTY	TEST METHOD	VALUE
Density, g/cm <sup>3</sup>	ASTM D 1505	1.395
Tensile Strength, Machine Direction, psi (kg/cm <sup>2</sup> )	ASTM D 882	30,000 2,180
Ultimate Elongation, Machine Direction, %	ASTM D 882	115
Shrinkage, Machine Direction, % max. (Cross-machine Direction)	30 min. at 150°C	1.29 1.14
Yield Strength (F5), Machine Direction, psi (kg/cm <sup>2</sup> )	ASTM D 882	15,500 1,090
Modulus, Machine Direction, psi (kg/cm <sup>2</sup> )	ASTM D 882	550,000 38,700
Coefficient of Friction (A/B), Static Kinetic	ASTM D 1894	0.40 0.36

- (1) Sample size is 1.5 inch diameter by approximately 0.5 inch stack height.
- (2) All metric conversions are approximate.
- (3) Single ply, 5mm probe, at an applied strain rate equivalent to ASTM D3489.
- (4) Ct method, percent of original thickness.
- (5) 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.

10/10/2017 AJ III

Page 2 of 2