

# PELLETHANE 2103-80AE

## Thermoplastic Polyurethane Elastomer

### Overview

### Applications

Physical Properties <sup>(1)</sup>	Test Method	English Units	SI Units
Hardness Shore A	ASTM D 2240	82A	82A
Specific Gravity	ASTM D 792	1.13	1.13
Melt Flow Rate 224° C/1200g	ASTM D 1238	-- g/10 mg	40 g/10 min
Taber Abrasion, Wt Loss, 1000g wt 1-1000g, H-22 (coarser)	ASTM D 1044	-- mg	20 mg
Mold Shrinkage, Transverse direction	ASTM D 955	-0.2-0.5 %	-0.2-0.5 %
Mold Shrinkage, Flow direction	ASTM D 955	0.6-0.8 %	0.6-0.8 %
Mechanical Properties <sup>(2)</sup>			
Tensile Modulus	ASTM D 412		
50% elongation		600 psi	4.1 MPa
100% elongation		800 psi	5.5 MPa
300% elongation		1700 psi	11.7 MPa
Ultimate Elongation	ASTM D 412	600 %	600 %
Ultimate Tensile Strength	ASTM D 412	5000 psi	34.5 MPa
Elongation Set After Break	ASTM D 412	70 %	70 %
Tear Strength, Die C	ASTM D 624	600 PLI	105 KN/m
Compression Set, Method B 22 hrs @ 25° C	ASTM D 395	30 %	30 %
22 hrs @ 70° C		33 %	33 %
Thermal Properties			
Vicat Softening Point (120° C/hr, 9.8N)	ASTM D 1525	185 °F	85.0 °C
Glass Transition Temperature	DSC	-40 °F	-40 °C
CLTE, in-flow, -30 to -80° C	ASTM D 696	93.2 in/in/°F	168 mm/mm/°C
Processing Conditions (Typical)			
Drying Temperature (air dew point <-40C)		180-200 °F	82-93 °C
Melt Temperature (Molding)		360-410 °F	182-210 °C
Melt Temperature (Extrusion)		360-390 °F	182-199 °C
Mold Temperature		60-140 °F	16-60 °C

### Notes

1. Typical properties; not to be construed as sales specifications. Fabrication conditions, part design, additives, processing aids, finishing materials, and use conditions can all affect the integrity, performance, and regulatory status of finished goods.
2. Tests conducted on 0.125 inch (3.2 mm) injection molded specimen, unannealed, unless noted.

