

Type: Isoplast® 301 is an engineering thermoplastic polyurethane resin.

Properties	Test Method	Values ⁽¹⁾
Physical		
Mould Shrinkage, %	ASTM D 955	0.4-0.6
Water Absorption, 24 hours at 23°C, %	ASTM D 570	0.19
Specific Gravity, g/cm³	ASTM D 792	1.20
Mechanical		
Tensile Strength at Yield, MPa	ASTM D 638	69
Tensile Strength at Break, MPa	ASTM D 638	63
Elongation at Yield, %	ASTM D 638	7
Elongation at Break, %	ASTM D 638	140
Tensile Modulus, MPa	ASTM D 638	2,100
Flexural Strength, MPa	ASTM D 790	97
Flexural Modulus, MPa	ASTM D 790	2,300
Izod Impact Strength	ASTM D 256	
3.2 mm; 23°C, J/m		128
3.2 mm; -40°C, J/m		43
6.4 mm, 23°C, J/m		91
Instrumented Dart Impact	ASTM D 3763	
@ 23°C, J		90
@ -29°C, J		90
Rockwell Hardness	ASTM D 785	
R Scale		123
M Scale		74
Thermal		
Heat Deflection Temperature Under Load	ASTM D 648	
HDT/B (0.46 MPa) unannealed, °C		88
HDT/B (0.46 MPa) annealed, °C		104
HDT/A (1.8 MPa) unannealed, °C		77
HDT/A (1.8 MPa) annealed, °C		99
Vicat Temperature, °C	ASTM D 1525	109
Coefficient of Linear Thermal Expansion	ASTM D 696	6.1 K ⁻¹ x 10 ⁻⁵

July 20, 2009

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

© 2009 The Lubrizol Corporation. All Rights Reserved.



Lubrizol Advanced Materials, Inc.

9911 Brecksville Road
 Cleveland, OH 44141-3247
 888-234-2436

www.estane.com

**Optical**

Gardner 60° Gloss, %	ASTM D 823	-
Light Transmission, %	ASTM D 1003	90
Yellowness Index	ASTM D 1925	6

Processing Information

Recommended Drying Temperature, °C	95-110
Recommended Melt Temperature, °C	230-250
Recommended Mould Temperature, °C	65-95

1. Typical values, not to be construed as specifications. Users should confirm results by their own tests.