Isoplast® 301 ETP

Wednesday, November 6, 2019

Lubrizol Advanced Materials, Inc. - Engineering Thermoplastic Polyurethane

General Information

Product Description

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

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Forms	• Pellets		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Molding Shrinkage - Flow	4.0E-3 to 6.0E-3	in/in	ASTM D955
Water Absorption (24 hr, 73°F)	0.19	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	305000	psi	ASTM D638
Tensile Strength (Yield)	10000	psi	ASTM D638
Tensile Strength (Break)	9140	psi	ASTM D638
Tensile Elongation (Yield)	7.0	%	ASTM D638
Tensile Elongation (Break)	140	%	ASTM D638
Flexural Modulus	334000	psi	ASTM D790
Flexural Strength	14100	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
-40°F, 0.126 in	0.81	ft·lb/in	
73°F, 0.126 in	2.4	ft·lb/in	
73°F, 0.252 in	1.7	ft·lb/in	
Instrumented Dart Impact			ASTM D3763
-20°F	797	in·lb	
73°F	797	in·lb	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	74		
R-Scale	123		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	190	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Annealed)	219	°F	ASTM D648
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	171	°F	
Deflection Temperature Under Load (264 psi, Annealed)	210	°F	ASTM D648
Vicat Softening Temperature	228	°F	ASTM D1525
CLTE - Flow	3.4E-5	in/in/°F	ASTM D696
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance	90.0	%	ASTM D1003

Isoplast® 301 ETP

Lubrizol Advanced Materials, Inc. - Engineering Thermoplastic Polyurethane

Optical	Nominal Value	Unit	Test Method
Yellowness Index	6.0	YI	ASTM D1925

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	203 to 230	°F
Processing (Melt) Temp	446 to 482	°F
Mold Temperature	149 to 203	°F

Notes

[1] Typical properties: these are not to be construed as specifications.