

Technical Data Sheet

Type: Isoplast[®] 301 is an engineering thermoplastic resin.

Typical Properties	Test Method	English		S.I.	
		Values*	Units	Values*	Units
Physical					
Gardner 60° Gloss	ASTM D823	-	%	-	%
Mold Shrinkage	ASTM D 955	0.004-0.006	In/in	0.004-0.006	mm/mm
Water Absorption, 24 hours at 73°F (23°C)	ASTM D 570	1.19	%	1.19	%
Specific Gravity	ASTM D 792	1.20		1.20	
Mechanical					
Tensile Strength at Yield	ASTM D 638	10,000	psi	69	MPa
Tensile Strength at Break	ASTM D 638	9,000	psi	63	MPa
Elongation at Yield	ASTM D 638	7	%	7	%
Elongation at Break	ASTM D 638	140	%	140	%
Tensile Modulus	ASTM D 638	310,000	psi	2,100	MPa
Flexural Strength	ASTM D 790	14,000	psi	97	MPa
Flexural Modulus	ASTM D 790	340,000	psi	2,300	MPa
Izod Impact Strength	ASTM D 256	2.4	ft-lb/in	128	J/m
- Notched, 1/8" (3.2 mm), 73°F (23°C)		0.8	ft-lb/in	43	J/m
- Notched, 1/4" (6.4mm), 73°F (23°C)		1.7	ft-lb/in	91	J/m
Instrumented Dart Impact	ASTM D 3763	800	In-lb	90	J
- Total Energy at 73°F (23°C)		800	In-lb	90	J
Rockwell Hardness	ASTM D 785	123		123	
- R Scale		74		74	
- M Scale					
Thermal					
Deflection Temperature Under Load	ASTM D 648	190	°F	88	°C
- 66 psi (0.45 MPa), unannealed		220	°F	104	°C
- 66 psi (0.45 MPa), annealed		170	°F	77	°C
- 264 psi (1.8 MPa), unannealed		210	°F	99	°C
- 264 psi (1.8 MPa), annealed					
Vicat Temperature	ASTM D 1525	228	°F	109	°C
Coefficient of Linear Thermal Expansion	ASTM D 696	3.4	10 ⁻⁵ in/in/°F	6.1	10 ⁻⁵ mm/mm/°C
Optical					
Light Transmission	ASTM D 1003	90	%	90	%
Yellowness Index	ASTM D 1925	6	%	6	%
Processing Information					
Recommended Drying Temperature		200-230	°F	93-110	°C
Recommended Melt Temperature		450-480	°F	232-249	°C
Recommended Mold Temperature		150-200	°F	66-93	°C

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

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