

General Information

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Europe North America Pacific Rim
Test Standards Available	<ul style="list-style-type: none"> ASTM ISO
Features	<ul style="list-style-type: none"> Clarity, High Colorability, Good Dimensional Stability, Good Electrically Insulating Extinguishing, Self Heat Resistance, High Impact Resistance, Good Mold Release, Good Toxicity, None UV Resistance, Good Viscosity, High Weather Resistance, Good
Uses	<ul style="list-style-type: none"> Automotive Applications Electrical/Electronic Applications Medical Appliances Optical Applications Sporting Goods
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Blow Molding Extrusion

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.20	sp gr 23/23°C	ASTM D792
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.3	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.305	in ³ /10min	ISO 1133
Mold Shrink, Linear-Flow (0.118 in)	0.0050 to 0.0080	in/in	ASTM D955
Mold Shrink, Linear-Trans (0.118 in)	0.0050 to 0.0080	in/in	ASTM D955
Molding Shrinkage (Across Flow)	0.50 to 0.70	%	ISO 294-4
(Flow)	0.50 to 0.70	%	
Water Absorption @ 24 hrs	0.25	%	ASTM D570
Water Absorption 24h/23C	0.24	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	348000	psi	ISO 527-1, -2
Tensile Strength (73 °F)	9020	psi	ASTM D638
Tensile Stress at Yield	8700	psi	ISO 527-1, -2
Tensile Strain at Yield	5.4	%	ISO 527-1, -2
Tensile Elongation @ Brk (73 °F)	120	%	ASTM D638
Nominal Tensile Strain at Break	110	%	ISO 527-1, -2
Flexural Modulus (73 °F)	334000	psi	ASTM D790
Flexural Modulus	334000	psi	ISO 178
Flexural Strength (73 °F)	12400	psi	ASTM D790
Flexural Strength	13500	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73 °F)	41.9	ft-lb/in ²	ISO 179
Charpy Unnotched Impact Strength (73 °F)	No Break	ft-lb/in ²	ISO 179
Notched Izod Impact (0.126 in)	16.3	ft-lb/in	ASTM D256

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	65	ASTM D785
(R-Scale)	123	
Thermal	Nominal Value Unit	Test Method
DTUL @66psi - Unannealed	302 °F	ASTM D648
HDT B (0.45 MPa) Unannealed	293 °F	ISO 75B-1, -2
DTUL @264psi - Unannealed	277 °F	ASTM D648
HDT A (1.80 MPa) Unannealed	268 °F	ISO 75A-1, -2
CLTE, Flow (68 to 176°F (20 to 80°C))	0.000036 in/in/°F	ASTM D696
Coefficient of Linear Thermal Expansion, Flow	0.000036 in/in/°F	ISO 11359-1, -2
Coefficient of Linear Thermal Expansion, Transverse	0.000037 in/in/°F	ISO 11359-1, -2
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+15 ohms	ASTM D257
Surface Resistivity	6.0E+15 ohms	IEC 60093
Volume Resistivity	2.1E+16 ohm-cm	ASTM D257
Volume Resistivity	3.0E+16 ohm-cm	IEC 60093
Dielectric Strength	508 V/mil	ASTM D149
Dielectric Constant (1E+6 Hz)	2.850	ASTM D150
Dissipation Factor (1E+6 Hz)	0.0082	ASTM D150
Dissipation Factor (100 Hz)	0.000600	IEC 60250
(1E+6 Hz)	0.00900	
Comp Track Index	280 V	IEC 60112
Electric Strength		IEC 60243-1
(0.0394 in)	790 V/mil	
(0.118 in)	460 V/mil	
Relative Permittivity		IEC 60250
(100 Hz)	3.10	
(1E+6 Hz)	3.10	

Additional Properties

Water Absorption, ASTM D570, 24 hr, 73°F: 0.23 - 0.26 %
 Deflection Temperature Under Load, ASTM D648, 66 psi: 293 - 311°F
 Deflection Temperature Under Load, ASTM D648, 264 psi: 270 - 284°F
 Coefficient of Linear Thermal Expansion, ASTM D696, 68 to 176°F: 3.33 - 3.88 in⁻⁵/in-°F
 Tensile Strength, ASTM D638, 73°F: 8528 - 9514 psi
 Tensile Elongation, ASTM D638, 73°F: 90 - 140 %
 Flexural Strength, ASTM D790, 73°F: 11661 - 13082 psi
 Izod Impact Strength, ASTM D256, Notched, 0.125 in: 13.9 - 18.7 ft-lb/in
 Rockwell Hardness, ASTM D785, R-Scale: 122 - 124
 Rockwell Hardness, ASTM D785, M-Scale: 60 - 70
 Dielectric Strength, ASTM D149: 18 - 22 kV/mm
 Molding Shrinkage, ISO 294-4, 3.2 mm, Flow: 0.5 to 0.7%
 Molding Shrinkage, ISO 294-4, 3.2 mm, Across Flow: 0.5 to 0.7%

Notes

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

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