

SABIC Innovative Plastics NORYL LTA1350 PPE+PS (Asia Pacific)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS)

Material Notes:

Noryl* LTA1350 is an unfilled, injection moldable grade. Designed for improved long term heat aging, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V0 UL94 rating. Noryl LTA1350 is currently available in both black and gray and may be an excellent material candidate for application requiring electrically insulating properties.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-LTA1350-PPEPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D792
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 5.00 kg, Temperature 280 Â°C	10 g/10 min @Load 11.0 lb, Temperature 536 Â°F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 280 Â°C	10 g/10 min @Load 11.0 lb, Temperature 536 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	80.0 MPa	11600 psi	50 mm/min; ISO 527
Tensile Strength, Yield	80.0 MPa	11600 psi	Type I, 50 mm/min; ASTM D638
	83.0 MPa	12000 psi	50 mm/min; ISO 527
Elongation at Break	6.0 %	6.0 %	50 mm/min; ISO 527
	18 %	18 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.8 %	4.8 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.84 GPa	412 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.83 GPa	English 412 ksi	Comments 5 mm/min; ASTM D638
Flexural Yield Strength	118 MPa	17100 psi	1.3 mm/min, 50 mm span; ASTM D790
	131 MPa	19000 psi	2 mm/min; ISO 178
Flexural Modulus	2.77 GPa	402 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.91 GPa	422 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	0.380 J/cm	0.712 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	14.0 J/cm	26.2 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	80*10*4; ISO 180/1A
	3.00 kJ/mÂ²	1.43 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched (ISO)	35.0 kJ/mÂ²	16.7 ft-lb/inÂ²	80*10*4; ISO 180/1U
	34.0 kJ/mÂ²	16.2 ft-lb/inÂ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	0.300 J/cmÂ²	1.43 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	17.0 J	12.5 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	83.0 Âµm/m-Â°C	46.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	83.0 Âµm/m-Â°C	46.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	89.0 Âµm/m-Â°C	49.4 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties	Metric $\mu\text{m}/\text{m}-\text{Â}^\circ\text{C}$	English $\mu\text{in}/\text{in}-\text{Â}^\circ\text{F}$	Comments
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	ISO 11359-2
Hot Ball Pressure Test	<= 135 Â°C	<= 275 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	128 Â°C @Thickness 3.20 mm	262 Â°F @Thickness 0.126 in	unannealed; ASTM D648
	134 Â°C @Thickness 6.40 mm	273 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	115 Â°C	239 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	112 Â°C @Thickness 3.20 mm	234 Â°F @Thickness 0.126 in	unannealed; ASTM D648
	116 Â°C @Thickness 6.40 mm	241 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	135 Â°C	275 Â°F	Rate B/50; ISO 306
	137 Â°C	279 Â°F	Rate B/120; ISO 306
	137 Â°C	279 Â°F	Rate B/50; ASTM D1525
UL RTI, Electrical	130 Â°C	266 Â°F	UL 746B
UL RTI, Mechanical with Impact	120 Â°C	248 Â°F	UL 746B
UL RTI, Mechanical without Impact	130 Â°C	266 Â°F	UL 746B
Flammability, UL94	V-2 @Thickness 0.750 mm	V-2 @Thickness 0.0295 in	UL 94 by SABIC-IP
	V-0 @Thickness 1.00 mm	V-0 @Thickness 0.0394 in	UL 94 by SABIC-IP
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94 by SABIC-IP
Glow Wire Test	800 Â°C	1470 Â°F	IEC 60695-2-13

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.70e+16 ohm-cm	3.70e+16 ohm-cm	ASTM D257
	3.70e+16 ohm-cm	3.70e+16 ohm-cm	IEC 60093

Surface Resistance Electrical Properties	4.20e+14 ohm Metric	4.20e+14 ohm English	ASTM D257 Comments
	4.20e+14 ohm	4.20e+14 ohm	ROA; IEC 60093
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.76	2.76	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.8	2.8	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	2.87	2.87	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.6 kV/mm	472 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	18.6 kV/mm	472 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	30.0 kV/mm	762 kV/in	in oil; IEC 60243-1
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	30.0 kV/mm	762 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0030	0.0030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0030	0.0030	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.025	0.025	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.025	0.025	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A

Electrical Properties	250 V Metric	250 V English	IEC 60112 Comments
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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