

SABIC Innovative Plastics NORYL WCA105 PPE-TPE

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyphenylene Ether/PPO

Material Notes:

Flexible, non-halogenated FR mPPE extrusion grade ideal for evaluation in applications such as wire insulation. Flame retardant performance capable of meeting VW1 and 105C temperature rating requirements as defined by UL 1581. 56 Shore D hardness. Excellent processing using standard extrusion equipment. UL 1581 tests conducted on 2.0 mm wire with 0.12 mm x 20 stranded copper conductor.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-WCA105-PPE-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	ASTM D792
Water Absorption	0.10 % @Time 173000 sec	0.10 % @Time 48.0 hour	ASTM D570
Melt Flow	5.1 g/10 min @Load 10.0 kg, Temperature 250 Â°C	5.1 g/10 min @Load 22.0 lb, Temperature 482 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	56	56	ISO 868
Tensile Strength at Break	23.0 MPa	3340 psi	Type I, 50 mm/min; ASTM D638
	23.0 MPa	3340 psi	50 mm/min; ISO 527
	33.0 MPa	4790 psi	UL 1581
	36.0 MPa	5220 psi	after 7days @136Â°C; UL 1581
Elongation at Break	85 %	85 %	Type I, 50 mm/min; ASTM D638
	90 %	90 %	50 mm/min; ISO 527
	156 %	156 %	after 7days @136Â°C; UL 1581
	197 %	197 %	UL 1581
Flexural Modulus	0.650 GPa	94.3 ksi	12.5 mm/min, 100 mm span; ASTM D790
	0.720 GPa	104 ksi	12.5 mm/min; ISO 178
Tear Strength	25.0 kN/m	143 pli	ISO 6383
Heat Distortion	26 % @Load 0.250 kg,	26 % @Load 0.551 lb,	UL 1581

Mechanical Properties	Temperature 121 Â°C Metric	Temperature 250 Â°F English	Comments
Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	105 Â°C	221 Â°F	UL temperature rating; UL 1581
Deflection Temperature at 0.46 MPa (66 psi)	85.0 Â°C @Thickness 6.40 mm	185 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	102 Â°C	216 Â°F	Rate A/50; ISO 306
Brittleness Temperature	<= -40.0 Â°C	<= -40.0 Â°F	ASTM D746
Oxygen Index	25 %	25 %	ISO 4589
Glow Wire Test	750 Â°C	1380 Â°F	IEC 60695-2-13
	960 Â°C @Thickness 3.00 mm	1760 Â°F @Thickness 0.118 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.90e+16 ohm-cm	3.90e+16 ohm-cm	IEC 60093
Dielectric Constant	2.5 @Frequency 1.00e+6 Hz	2.5 @Frequency 1.00e+6 Hz	IEC 60250
	2.6 @Frequency 50.0 - 60.0 Hz	2.6 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	26.0 kV/mm @Thickness 2.00 mm	660 kV/in @Thickness 0.0787 in	in oil; IEC 60243-1
Dissipation Factor	0.0038 @Frequency 1.00e+6 Hz	0.0038 @Frequency 1.00e+6 Hz	IEC 60250
	0.024 @Frequency 50.0 - 60.0 Hz	0.024 @Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Smoke Density on 0.5mm plaque, Flame, Ds, max	150	ASTM E 662
Smoke Density on 0.5mm plaque, Non-flame, Ds, max	75	ASTM E 662

Descriptive Properties	Value	Comments
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China