

PTS Tristar® PC-10GFR-(V) 10% Glass Reinforced UV Stabilized Polycarbonate With Release

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Glass Fiber Filled, Flame Retardant

Material Notes:

Information provided by Polymer Technology and Services, LLC (PTS).

Order this product through the following link:

http://www.lookpolymers.com/polymer_PTS-Tristar-PC-10GFR-V-10-Glass-Reinforced-UV-Stabilized-Polycarbonate-With-Release.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	ASTM D792
Water Absorption	0.12 %	0.12 %	24 hours at 73°F; ASTM D570
Linear Mold Shrinkage	0.0020 - 0.0040 cm/cm @Thickness 3.17 mm	0.0020 - 0.0040 in/in @Thickness 0.125 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength, Yield	62.0 MPa @Thickness 3.17 mm	8990 psi @Thickness 0.125 in	ASTM D638
Elongation at Break	15 % @Thickness 3.17 mm	15 % @Thickness 0.125 in	ASTM D638
Flexural Yield Strength	96.5 MPa @Thickness 3.17 mm	14000 psi @Thickness 0.125 in	ASTM D790
Flexural Modulus	3.10 GPa @Thickness 3.17 mm	450 ksi @Thickness 0.125 in	ASTM D790
Izod Impact, Notched	1.07 J/cm @Thickness 3.17 mm	2.00 ft-lb/in @Thickness 0.125 in	ASTM D256
Tensile Impact Strength	53.3 kJ/m ² @Thickness 3.17 mm	25.4 ft-lb/in ² @Thickness 0.125 in	ASTM D1822

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	138 °C	280 °F	ASTM D648
UL RTI, Electrical	80.0 °C	176 °F	

Thermal Properties	125 °C Metric	257 °F English	Comments
UL RTI, Mechanical with Impact	80.0 °C	176 °F	
	115 °C	239 °F	
UL RTI, Mechanical without Impact	80.0 °C	176 °F	
	125 °C	257 °F	
Flammability, UL94	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	
	@Thickness 2.40 mm	@Thickness 0.0945 in	
Oxygen Index	37.1 %	37.1 %	ASTM D2863
Glow Wire Test	875 °C	1610 °F	GWIT
	960 °C	1760 °F	GWFI

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.00e+15 ohm-cm	3.00e+15 ohm-cm	after 96 hours at 90°C, 50% RH; ASTM D257
	6.00e+15 ohm-cm	6.00e+15 ohm-cm	after 40 hours at 23°C, 50% RH; ASTM D257
Dielectric Strength	19.0 kV/mm	483 kV/in	ASTM D149
	@Thickness 3.00 mm	@Thickness 0.118 in	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	PLC 7
	60 - 120 sec	60 - 120 sec	PLC 6
Comparative Tracking Index	100 - 175 V	100 - 175 V	PLC 4
	175 - 250 V	175 - 250 V	PLC 3
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC 2
	60 - 120 sec	60 - 120 sec	PLC 1
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	PLC 0
	>= 120 arcs	>= 120 arcs	PLC 0
High Voltage Arc-Tracking Rate,			

HVTR Electrical Properties		80.0 - 150 mm/min Metric	3.15 - 5.91 in/min English	PLC 3 Comments
Descriptive Properties		Value		Comments
Suitability for Outdoor Use (all colors except WT)		(f1)		UL 746C
Suitability for Outdoor Use (WT)		(f2)		UL 746C

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