

PTS Tristar® PC-10FR-(V18) 18 MFI Flame Retardant, UV Stabilized Polycarbonate With Release

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, 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-10FR-V18-18-MFI-Flame-Retardant-UV-Stabilized-Polycarbonate-With-Release.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in ³	ASTM D792
Melt Flow	18 g/10 min @Load 1.20 kg, Temperature 300 °C	18 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength, Yield	62.1 MPa @Thickness 3.17 mm	9010 psi @Thickness 0.125 in	ASTM D638
Elongation at Break	75 % @Thickness 3.17 mm	75 % @Thickness 0.125 in	ASTM D638
Flexural Yield Strength	89.6 MPa @Thickness 3.17 mm	13000 psi @Thickness 0.125 in	ASTM D790
Flexural Modulus	2.21 GPa @Thickness 3.17 mm	321 ksi @Thickness 0.125 in	ASTM D790
Izod Impact, Notched	5.34 J/cm @Thickness 3.17 mm	10.0 ft-lb/in @Thickness 0.125 in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.2 µm/m-°C @Temperature -40.0 - 95.0 °C	39.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E831-06
CTE, linear, Transverse to Flow	68.4 µm/m-°C @Temperature -40.0 - 95.0 °C	38.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E831-06

Thermal Properties <small>Deflection Temperature at 1.8 MPa (104 psi)</small>	Metric <small>121 °C</small>	English <small>250 °F</small>	Comments <small>ASTM D248</small>
	137 °C	279 °F	ISO 75
UL RTI, Electrical	125 °C	257 °F	
UL RTI, Mechanical with Impact	115 °C	239 °F	
UL RTI, Mechanical without Impact	125 °C	257 °F	
Flammability, UL94	V-1	V-1	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	36.9 %	36.9 %	ASTM D2863
Glow Wire Test	775 °C	1430 °F	GWIT
	960 °C	1760 °F	GWFI

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	PLC 6
Comparative Tracking Index	250 - 400 V	250 - 400 V	PLC 2
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	PLC 3
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	30 - 60 sec	30 - 60 sec	PLC 2
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	PLC 1
	@Thickness 3.00 mm	@Thickness 0.118 in	
	>= 120 arcs	>= 120 arcs	PLC 0
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	PLC 3

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	243 - 260 °C	470 - 500 °F	
Middle Barrel Temperature	249 - 260 °C	480 - 500 °F	
Front Barrel Temperature	260 - 271 °C	500 - 520 °F	

Processing Properties	Metric 271 °C	English 10 °F	Comments
Melt Temperature	260 - 282 °C	500 - 540 °F	
Mold Temperature	71.1 - 93.3 °C	160 - 200 °F	
Drying Temperature	121 °C	250 °F	
Dry Time	3 - 4 hour	3 - 4 hour	48 hours max.
Injection Pressure	51.7 - 124 MPa	7500 - 18000 psi	
Back Pressure	0.345 - 1.38 MPa	50.0 - 200 psi	
Clamp Pressure	27.6 - 68.9 MPa	4000 - 10000 psi	
Shot Size	40 - 60 %	40 - 60 %	
Screw Speed	40 - 70 rpm	40 - 70 rpm	

Descriptive Properties	Value	Comments
Injection Speed- Edge Gate	Slow to Medium	
Injection Speed- Tab Gate	Medium to Fast	
Injection Speed- Tunnel Gate	Fast	

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