

PTS Tristar® PC-10FR-(8) 8 MFI Flame Retardant 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-8-8-MFI-Flame-Retardant-Polycarbonate-With-Release.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in³	ASTM D792
Melt Flow	8.0 g/10 min	8.0 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength, Yield	62.1 MPa	9010 psi	ASTM D638
	@Thickness 3.17 mm	@Thickness 0.125 in	
Elongation at Break	75 %	75 %	ASTM D638
	@Thickness 3.17 mm	@Thickness 0.125 in	
Flexural Yield Strength	89.6 MPa	13000 psi	ASTM D790
	@Thickness 3.17 mm	@Thickness 0.125 in	
Flexural Modulus	2.21 GPa	321 ksi	ASTM D790
	@Thickness 3.17 mm	@Thickness 0.125 in	
Izod Impact, Notched	5.87 J/cm	11.0 ft-lb/in	ASTM D256
	@Thickness 3.17 mm	@Thickness 0.125 in	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.2 µm/m-°C	39.0 µin/in-°F	ASTM E831-06
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
CTE, linear, Transverse to Flow	68.4 µm/m-°C	38.0 µin/in-°F	ASTM E831-06
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Deflection Temperature at 1.8 MPa (264 psi)	127 °C	261 °F	ASTM D648

Thermal Properties	^{137 °C} Metric	^{279 °F} English	^{ISO 75} Comments
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	277 - 291 °C	530 - 555 °F	
Middle Barrel Temperature	282 - 293 °C	540 - 560 °F	
Front Barrel Temperature	299 - 318 °C	570 - 605 °F	
Nozzle Temperature	291 - 318 °C	555 - 605 °F	

Processing Properties	Metric	English	Comments
Mold Temperature	76.7 - 104 °C	170 - 220 °F	
Drying Temperature	121 °C	250 °F	
Dry Time	3 - 4 hour	3 - 4 hour	48 hours max.
Injection Pressure	96.5 - 138 MPa	14000 - 20000 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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