

PTS Tristar® PC-10FR-(VIM) 12 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-VIM-12-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
Water Absorption	0.18 %	0.18 %	24 hours at 73°F; ASTM D570
Melt Flow	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 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	55.0 MPa @Thickness 3.17 mm	7980 psi @Thickness 0.125 in	ASTM D638
Flexural Yield Strength	86.0 MPa @Thickness 3.17 mm	12500 psi @Thickness 0.125 in	ASTM D790
Flexural Modulus	2.07 GPa @Thickness 3.17 mm	300 ksi @Thickness 0.125 in	ASTM D790
Izod Impact, Notched	7.47 J/cm @Thickness 3.17 mm	14.0 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
Deflection Temperature at 0.46 MPa (66 psi)	135 °C	275 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	127 °C	261 °F	ASTM D648
	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	254 - 274 °C	490 - 525 °F	
Middle Barrel Temperature	266 - 277 °C	510 - 530 °F	

Front Barrel Temperature Processing Properties	277 - 293 °C Metric	530 - 560 °F English	Comments
Nozzle Temperature	271 - 293 °C	520 - 560 °F	
Melt Temperature	282 - 304 °C	540 - 580 °F	
Mold Temperature	71.1 - 93.3 °C	160 - 200 °F	
Drying Temperature	121 °C	250 °F	
Dry Time	4 hour	4 hour	
Injection Pressure	75.8 - 124 MPa	11000 - 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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