

TRISTAR® PC-10FRN

Polycarbonate

Polymer Technology and Services, LLC

Message:

TRISTAR® PC-10FRN is a polycarbonate (PC) product. It can be processed by injection molding and is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. TRISTAR® PC-10FRN application areas include electrical/electronic applications and wire and cable. Features include:

- flame retardant/rated flame
- Comply with REACH standard
- ROHS certification
- Flame Retardant
- mold release agent

General Information			
UL YellowCard	E155285-223920	E155285-101349314	
Additive	demoulding		
	Flame retardancy		
Features	Good demoulding performance		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Communication Equipment		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.23	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Water Absorption (23°C, 24 hr)	0.18	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 3.17 mm)	62.1	MPa	ASTM D638
Tensile Elongation (Break, 3.17 mm)	75	%	ASTM D1708
Flexural Modulus (3.17 mm)	2210	MPa	ASTM D790
Flexural Strength (Yield, 3.17 mm)	89.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.17 mm)	590	J/m	ASTM D256
Tensile Impact Strength (3.17 mm)	443	kJ/m²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	135	°C	ASTM D648
1.8 MPa, not annealed	134	°C	ISO 75-2/A
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 95°C	7.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 95°C	6.8E-5	cm/cm/°C	ASTM E831
RTI Elec	125	°C	UL 746
RTI Imp	115	°C	UL 746
RTI	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Arc Resistance	60.0 - 120	sec	ASTM D495
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	250 - 400	V	UL 746
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	> 120		UL 746
2.50 mm	60.0 - 120		UL 746
3.00 mm	60.0 - 120		UL 746
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	PLC 0		UL 746
2.50 mm	PLC 1		UL 746
3.00 mm	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	80.0 - 150	mm/min	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	15 - 30	sec	UL 746
2.50 mm	15 - 30	sec	UL 746
3.00 mm	30 - 60	sec	UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	PLC 3		UL 746
2.50 mm	PLC 3		UL 746
3.00 mm	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
2.50 mm, BK, GY, BG	5VA		UL 94
3.00 mm	5VA		UL 94
Glow Wire Flammability Index	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	775	°C	IEC 60695-2-13
Oxygen Index	38	%	ASTM D2863
Injection	Nominal Value	Unit	

Drying Temperature	121	°C
Drying Time	4.0	hr
Rear Temperature	254 - 274	°C
Middle Temperature	266 - 277	°C
Front Temperature	277 - 293	°C
Nozzle Temperature	271 - 293	°C
Processing (Melt) Temp	282 - 304	°C
Mold Temperature	71.1 - 93.3	°C
Injection Pressure	75.8 - 124	MPa
Back Pressure	0.345 - 1.38	MPa

Injection instructions

Injection Speed - Edge Gate: Slow to Medium Injection Speed - Tab Gate: Medium to Fast Injection Speed - Tunnel Gate: Fast

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