TRIREX® 3020IR

Polycarbonate

Samyang Corporation

Message:

TRIREX is the registered trademark of polycarbonate resin manufactured by Samyang Corporation. TRIREX polycarbonate resins offer superior mechanical properties, good dimensional stability and high electrical performance, which allows it to be widely used for electrical, electronic, appliance, automotive and optical industries. TRIREX 3020IR is a polycarbonate resin grade which has high low temperature impact strength in combination with superior mechanical and physical property. CHARACTERISTICS Superior low temperature impact resistance Good flow-ability

Workable under a wide range of temperatures (-100°C ~ 135°C) High electrical performance Good dimensional stability Low moisture absorbency Good weather resistance APPLICATIONS TRIREX 3020IR resin grade is used for electric and electronic applications, food contact materials and etc. Low viscosity. Transparent colors only.

General Information				
UL YellowCard	E121254-220598	E257054-521406	E366374-101723899	
Features	Food Contact Acceptable			
	Good Dimensional Stability			
	Good Electrical Properties			
	Good Flow			
	Good Weather Resistance			
	Low Moisture Absorption			
	Low Temperature Impact Resistance			
	Low Viscosity			
Uses	Appliances			
	Automotive Applications			
	Electrical/Electronic Applications			
	Non-specific Food Applications			
	Optical Applications			
Appearance	Clear/Transparent			
Forms	Pellets			
Processing Method	Injection Molding			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.20	g/cm³	ASTM D792	
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	23	g/10 min	ASTM D1238	

Molding Shrinkage - Flow (3.00 mm)	0.50 to 0.70	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.15	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	67.0	MPa	ASTM D638
Tensile Elongation (Break)	130	%	ASTM D638
Flexural Modulus	2250	MPa	ASTM D790
Flexural Strength (Yield)	92.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	790	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	133	°C	ASTM D648
CLTE - Flow	5.0E-5 to 7.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	4.0E+16	ohms·cm	ASTM D257
Dielectric Strength	30	kV/mm	ASTM D149
Arc Resistance	120	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm)	V-2		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 to 5.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	235 to 260	°C	
Middle Temperature	250 to 275	°C	
Front Temperature	265 to 290	°C	
Nozzle Temperature	265 to 300	°C	
Processing (Melt) Temp	265 to 300	°C	
Mold Temperature	65.0 to 105	°C	
Back Pressure	0.250 to 0.700	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.020 to 0.080	mm	

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