

TRIREX® 3022L1(I3)

Samyang Corporation - Polycarbonate

General Information
Product Description

- 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 3022L1(I3) 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 3022L1(I3) resin grade is used for electric and electronic applications, headlamp lens, food contact materials and etc.
- Medium viscosity. Transparent colors only.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Food Contact Acceptable	• Good Flow	• Low Temperature Impact Resistance
	• Good Dimensional Stability	• Good Weather Resistance	• Medium Viscosity
	• Good Electrical Properties	• Low Moisture Absorption	
Uses	• Appliances	• Electrical/Electronic Applications	• Non-specific Food Applications
	• Automotive Applications	• Lenses	• Optical Applications
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

	Nominal Value	Unit	Test Method
Physical			
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.118 in)	5.0E-3 to 7.0E-3	in/in	ASTM D955
Water Absorption (24 hr, 73°F)	0.15	%	ASTM D570
Mechanical			
Tensile Strength (Yield)	10400	psi	ASTM D638
Tensile Elongation (Break)	130	%	ASTM D638
Flexural Modulus	326000	psi	ASTM D790
Flexural Strength (Yield)	13300	psi	ASTM D790
Impact			
Notched Izod Impact (73°F, 0.125 in)	17	ft·lb/in	ASTM D256
Thermal			
Deflection Temperature Under Load (264 psi, Unannealed)	273	°F	ASTM D648
CLTE - Flow	2.8E-5 to 3.9E-5	in/in/°F	ASTM D696
Electrical			
Volume Resistivity	4.0E+16	ohms·cm	ASTM D257



Dielectric Strength	760 V/mil	ASTM D149
Arc Resistance	120 sec	ASTM D495
Flammability	Nominal Value Unit	Test Method
Flame Rating (0.06 in)	V-2	UL 94

Processing Information

Injection	Nominal Value Unit
Drying Temperature	248 °F
Drying Time	3.0 to 5.0 hr
Suggested Max Moisture	0.020 %
Rear Temperature	473 to 518 °F
Middle Temperature	500 to 545 °F
Front Temperature	527 to 572 °F
Nozzle Temperature	527 to 590 °F
Processing (Melt) Temp	527 to 590 °F
Mold Temperature	149 to 221 °F
Back Pressure	36.3 to 102 psi
Screw Speed	40 to 70 rpm
Vent Depth	7.9E-4 to 3.1E-3 in

Notes

¹ Typical properties: these are not to be construed as specifications.

