

# TRIEX® 3022IR(01)

Polycarbonate  
Samyang Corporation

## Message:

TRIEX is the registered trademark of polycarbonate resin manufactured by Samyang Corporation. TRIEX 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.

TRIEX 3022IR(01) 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

TRIEX 3022IR(01) resin grade is used for electric and electronic applications, food contact materials and etc.  
Medium viscosity. Transparent colors only.

General Information			
Features	Food Contact Acceptable		
	Good Dimensional Stability		
	Good Electrical Properties		
	Good Flow		
	Good Weather Resistance		
	Low Moisture Absorption		
	Low Temperature Impact Resistance		
	Medium Viscosity		
Uses	Appliances		
	Automotive Applications		
	Electrical/Electronic Applications		
	Food Service Applications		
	Optical Applications		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	14	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
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Strength (Yield)	69.0	MPa	ASTM D638
Tensile Elongation (Break)	130	%	ASTM D638
Flexural Modulus	2250	MPa	ASTM D790
Flexural Strength (Yield)	93.0	MPa	ASTM D790
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact (23°C, 3.18 mm)	880	J/m	ASTM D256
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (1.8 MPa, Unannealed)	134	°C	ASTM D648
CLTE - Flow	5.0E-5 to 7.0E-5	cm/cm/°C	ASTM D696
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	4.0E+16	ohms·cm	ASTM D257
Dielectric Strength	30	kV/mm	ASTM D149
Arc Resistance	120	sec	ASTM D495
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.59 mm)	V-2		UL 94
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Drying Temperature	120	°C	
Drying Time	3.0 to 5.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	245 to 270	°C	
Middle Temperature	260 to 285	°C	
Front Temperature	275 to 300	°C	
Nozzle Temperature	275 to 310	°C	
Processing (Melt) Temp	275 to 310	°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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