

## TRIEX® 3022A

Samyang Corporation - Polycarbonate

### General Information

#### Product Description

- 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 3022A 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 3022A resin grade is used in electric and electronic applications, and it shows superior performance as the material for backlight panel of cellular phones.
- Medium viscosity. Transparent colors only.

#### General

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

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	14	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	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	9720	psi	ASTM D638
Tensile Elongation (Break)	120	%	ASTM D638
Flexural Modulus	284000	psi	ASTM D790
Flexural Strength (Yield)	12300	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.125 in)	15	ft-lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	257	°F	ASTM D648
CLTE - Flow	2.8E-5 to 3.9E-5	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method



Volume Resistivity	4.0E+16 ohms·cm	ASTM D257
Dielectric Strength	760 V/mil	ASTM D149
Arc Resistance	120 sec	ASTM D495
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>
Flame Rating (0.06 in)	V-2	UL 94

Processing Information

<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>
Drying Temperature	248	°F
Drying Time	3.0 to 5.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	473 to 500	°F
Middle Temperature	482 to 527	°F
Front Temperature	509 to 554	°F
Nozzle Temperature	509 to 572	°F
Processing (Melt) Temp	509 to 572	°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

<sup>1</sup> Typical properties: these are not to be construed as specifications.

