TRIREX® 3027U

Samyang Corporation - Polycarbonate

Tuesday, November 5, 2019

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 3027U is a UV stabilized polycarbonate resin grade which has a high melt viscosity and transparency in combination with superior physical properties.

CHARACTERISTICS

- High UV stability
- Superior impact strength
- 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 3027U resin grade is used in out-door applications such as electric meter cover, window panes, sing board, wind break, signal lamps, and ship lights etc.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• UV Stabilizer		
Features	• Good Dimensional Stability • Good Electrical Properties	• Good Weather Resistance • High Impact Resistance	• Low Moisture Absorption • UV Resistant
Uses	• Appliances • Automotive Applications • Electrical/Electronic Applications	• Lighting Fixtures • Optical Applications • Outdoor Applications	• Windows & Doors
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (300°C/1.2 kg)	6.0	g/10 min	ASTM D1238
Water Absorption (24 hr, 73°F)	0.15	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	10200	psi	ASTM D638
Tensile Elongation (Break)	150	%	ASTM D638
Flexural Modulus	327000	psi	ASTM D790
Flexural Strength (Yield)	13300	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F, 0.125 in)	17	ft·lb/in	ASTM D256

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	275	°F	
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
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.06 in)	V-2		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Haze	0.400	%	ASTM D1003

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	455 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

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