TRIREX 3027U GRADE

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℃ ~ 135℃)
- 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.

TYPICAL DATA OF TRIREX 3027U GRADE

PROPERTY	UNIT	ASTM METHOD	TYPICAL DATA
PHYSICAL			
Specific Gravity	–	D792	1.20
Water Absorption (24 hours at 23℃)	%	D570	0.15
Melt Flow Rate (270℃, 1.2kg)	g/10min	D1238	9
MECHANICAL			
Tensile Strength at yield	kg_f/cm^2	D638	680
Tensile Elongation at break	%	D638	120
Flexural Strength at yield	kg_f/cm^2	D790	850
Flexural Modulus	kg_f/cm^2	D790	23,000
Izod Impact Strength, notched, 23℃ (1/8")	kg_f·cm/cm	D256	87
Rockwell Hardness	R scale	D785	120
THERMAL			
HDT, 4.6 kg_f/cm^2	℃	D648	147
HDT, 18.6 kg_f/cm^2	℃	D648	136
Coefficient of Linear Thermal Expansion	mm/mm/℃	D696	$5.6X10^{-5}$
ELECTRICAL			
Volume Resistivity	Ω·cm	D257	$4X10^{16}$
Dielectric Strength	kV/mm	D149	30
Dielectric Constant, 60Hz	–	D150	2.85
Dissipation Factor, 60Hz	–	D150	0.0092
ARC Resistance	sec	D495	120
OTHERS			
UL-94 Flammability (1/16" thickness)	–	(UL 94)	V-2
Mold Shrinkage (3mm thickness)	%	D955	0.5~0.7

The figures listed in this table are typical values obtained under the standard test methods and may not be applicable for products that are under different application condition.

PROCESSING GUIDE FOR TRIREX 3027U GRADE

General processing conditions for TRIREX 3027U are shown below. Drying prior to processing is essential to ensure desired appearance and property performance.

SPECIFICATION	UNIT	CONDITIONS
Drying Temperature	℃	120
Drying Time	hr	3~5
Moisture Content, Max	%	0.02
Melt Temperature	℃	290 ~ 320
Nozzle Temperature	℃	290 ~ 310
Front Temperature	℃	290 ~ 310
Middle Temperature	℃	280 ~ 300
Rear Temperature	℃	270 ~ 290
Mold Temperature	℃	80 ~ 100
Back Pressure	MPa	0.3 ~ 0.7
Screw Speed	rpm	40 ~ 70
Vent Depth	mm	0.02 ~ 0.08