

# TRIREX® 3025U

Samyang Corporation - Polycarbonate

Saturday, March 18, 2023

## 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 3025U is a UV stabilized polycarbonate resin grade which has a low melt viscosity and transparency in combination with superior physical properties.

### CHARACTERISTICS

- High ultraviolet(UV) stability
- High flowability
- Good impact resistance
- Workable under a wide range of temperatures (-100 ~ 135 )
- High electrical performance
- Good dimensional stability
- Excellent transparency
- Low moisture absorbency
- Good weather resistance

### APPLICATIONS

- TRIREX 3025U 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 Impact Resistance	• Good Weather Resistance • High Clarity • High Flow	• Low Moisture Absorption • Medium Viscosity • UV Resistant
Uses	• Appliances • Automotive Applications • Electrical/Electronic Applications	• Lighting Fixtures • Optical Applications • Outdoor Applications	• Windows & Doors
Automotive Specifications	• GM EDS-M-5301-31 • GM GMP.PC.001	• GM GMW15702-455301 PC • GM GMW16728P-PC-T3	
Forms	• Pellets		
Processing Method	• Injection Molding		

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	13	g/10 min	ASTM D1238
Water Absorption (24 hr, 23°C)	0.15	%	ASTM D570

## TRIEX® 3025U

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	70.1	MPa	ASTM D638
Tensile Elongation (Break)	140	%	ASTM D638
Flexural Modulus	2260	MPa	ASTM D790
Flexural Strength (Yield)	91.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	930	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
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
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	4.0E+16	ohms·cm	ASTM D257
Dielectric Strength	30	kV/mm	ASTM D149
Arc Resistance	120	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.6 mm)	V-2		UL 94

### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	3.0 to 5.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	235 to 260	°C
Middle Temperature	250 to 275	°C
Front Temperature	265 to 290	°C
Nozzle Temperature	265 to 300	°C
Processing (Melt) Temp	265 to 300	°C
Mold Temperature	65 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

### Notes

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