# TRIREX® 3027U(M1)

## Polycarbonate

### Samyang Corporation

#### Message:

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(M1) 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  $\sim$  135 °C)

High electrical performance

Good dimensional stability

Low moisture absorbency

Good weather resistance

Applications:

TRIREX 3027U(M1) resin grade is used for corrugated/multi-wall sheet and profile extrusion . UV stabilized. High viscosity. Transparent colors only.

General Information					
Additive	UV Stabilizer				
Features	Good Dimensional Stability				
	Good Electrical Properties				
	Good Flow				
	Good Weather Resistance				
	High Viscosity				
	Low Moisture Absorption				
	Low Temperature Impact Resistance				
Uses	Appliances				
	Automotive Applications				
	Electrical/Electronic Applications				
	Optical Applications				
Appearance	Clear/Transparent				
Processing Method	Profile Extrusion				
	Sheet Extrusion				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	1.20	g/cm³	ASTM D792		
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	2.0	g/10 min	ASTM D1238		
Water Absorption (24 hr)	0.15	%	ASTM D570		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Strength (Yield)	69.6	MPa	ASTM D638		

Tensile Elongation (Break)	100	%	ASTM D638
Flexural Modulus	2060	MPa	ASTM D790
Flexural Strength (Yield)	90.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	830	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	132	°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 (1.59 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Haze	0.40	%	ASTM D1003
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	
Rear Temperature Middle Temperature	235 to 260 250 to 275	°C °C	
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Middle Temperature	250 to 275	°C	
Middle Temperature Front Temperature	250 to 275 265 to 290	℃ ℃	
Middle Temperature Front Temperature Nozzle Temperature	250 to 275 265 to 290 265 to 300	°C ℃	
Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp	250 to 275 265 to 290 265 to 300 265 to 300	°C ℃ ℃	
Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp Mold Temperature	250 to 275 265 to 290 265 to 300 265 to 300 65.0 to 105	°C ℃ ℃ ℃	
Middle Temperature Front Temperature Nozzle Temperature Processing (Melt) Temp Mold Temperature Back Pressure	250 to 275 265 to 290 265 to 300 265 to 300 65.0 to 105 0.250 to 0.700	°C °C °C °C MPa	

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