

# TRIEX® 3020U

Polycarbonate  
Samyang Corporation

## Message:

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 3020U 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 3020U resin grade is used for Injection molding products. UV stabilized.
- Low viscosity. Transparent colors only.

General Information			
UL YellowCard	E121254-220598	E121254-220602	E257054-521400
	E366374-101723899		
Additive	UV Stabilizer		
Features	Good Dimensional Stability		
	Good Electrical Properties		
	Good Flow		
	Good UV Resistance		
	Good Weather Resistance		
	Low Moisture Absorption		
	Low Temperature Impact Resistance		
Uses	Low Viscosity		
	Appliances		
	Automotive Applications		
	Electrical/Electronic Applications		
Appearance	Optical Applications		
	Clear/Transparent		
	Pellets		
Forms	Injection Molding		
Processing Method			
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm <sup>3</sup>	ASTM D792

Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	23	g/10 min	ASTM D1238
Water Absorption (23°C, 24 hr)	0.15	%	ASTM D570
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Strength (Yield)	64.0	MPa	ASTM D638
Tensile Elongation (Break)	90	%	ASTM D638
Flexural Modulus	1960	MPa	ASTM D790
Flexural Strength (Yield)	86.0	MPa	ASTM D790
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact (23°C, 3.18 mm)	740	J/m	ASTM D256
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (1.8 MPa, Unannealed)	130	°C	ASTM D648
CLTE - Flow	5.0E-5 to 7.0E-5	cm/cm/°C	ASTM D696
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	4.0E+16	ohms·cm	ASTM D257
Dielectric Strength	30	kV/mm	ASTM D149
Arc Resistance	120	sec	ASTM D495
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.59 mm)	V-2		UL 94
<b>Optical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Haze	0.40	%	ASTM D1003
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
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	65.0 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	

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