

Product Information

# TRIEX<sup>®</sup> 3022IR Polycarbonate Resin



# TRIREX 3022IR 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 3022IR 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

- TRIREX 3022IR resin grade is used for electric and electronic applications, food contact materials and etc.
- Medium viscosity. Transparent colors only.

# TYPICAL DATA OF TRIEX 302IR GRADE



PROPERTY	UNIT	ASTM METHOD	TYPICAL DATA
<b>PHYSICAL</b>			
Specific Gravity	-	D792	1.20
Water Absorption (24 hours at 23°C)	%	D570	0.15
Melt Flow Rate (300°C, 1.2kg)	g/10min	D1238	14
<b>MECHANICAL</b>			
Tensile Strength at yield	kg <sub>f</sub> /cm <sup>2</sup> , Mpa, psi	D638	700, 69, 9950
Tensile Elongation at break	%	D638	130
Flexural Strength at yield	kg <sub>f</sub> /cm <sup>2</sup> , Mpa, psi	D790	950, 93, 13500
Flexural Modulus	kg <sub>f</sub> /cm <sup>2</sup> , Mpa, psi	D790	23,000, 2250, 327100
Izod Impact Strength, notched, 23°C (1/8")	kg <sub>f</sub> ·cm/cm, J/m, ft*lb/in	D256	90, 883, 17
Rockwell Hardness	R scale	D785	
<b>THERMAL</b>			
HDT, 18.6 kg <sub>f</sub> /cm <sup>2</sup>	°C, °F	D648	134, 273
Coefficient of Linear Thermal Expansion	mm/mm/°C	D696	5~7 x 10 <sup>-5</sup>
<b>ELECTRICAL</b>			
Volume Resistivity	Ω·cm	D257	4 x 10 <sup>16</sup>
Dielectric Strength	kV/mm	D149	30
Dielectric Constant	-	D150	
Dissipation Factor	-	D150	
ARC Resistance	sec	D495	120
<b>OTHERS</b>			
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 3022IR GRADE



- General processing conditions for TRIREX 3022IR are shown below. Drying prior to processing is essential to ensure desired appearance and property performance.

SPECIFICATION	UNIT	CONDITIONS
Drying Temperature	°C, °F	120, 250
Drying Time	hr	3 ~ 5
Moisture Content, Max	%	0.02
Melt Temperature	°C, °F	275~310, 530~590
Nozzle Temperature	°C, °F	275~310, 530~590
Front Temperature	°C, °F	275~300, 530~570
Middle Temperature	°C, °F	260~285, 500~545
Rear Temperature	°C, °F	245~270, 470~520
Mold Temperature	°C, °F	65~105, 150~220
Back Pressure	Mpa, psi	0.25 ~ 0.7 , 0.04~0.1
Screw Speed	rpm	40 ~ 70
Vent Depth	mm, inch	0.02 ~ 0.08, 0.0008~0.003

**SAMYANG Corporation**  
<http://www.samyang.com>

**HEAD OFFICE**

Samyang Corporation  
263 Yeonji-dong, Jongno-gu, Seoul, Korea  
TEL 82-2-740-7752 FAX 82-2-740-7700

**R&D CENTER**

63-2 Hwaam-dong, Yuseong-gu, Daejeon, Korea  
TEL 82-42-865-8053 FAX 82-42-865-8099

**JEONJU PLANT**

407 Palbok-dong 3-ga, Deokjin-gu, Jeonju, Korea  
TEL 82-63-210-6660 FAX 82-63-210-6677

**SAMYANG KASEI**

409 Palbok-dong 3-ga, Deokjin-gu, Jeonju, Korea  
TEL 82-63-210-1114 FAX 82-63-211-1240

**SAMYANG ENGINEERING PLASTICS (SHANGHAI) CO., LTD.**

131, Shuangying-lu, Qingpu Gongyeyuan-qu,  
Qingpu-qu, Shanghai, P.R.China  
TEL 86-21-6922-2086 FAX 86-21-6922-2271