

# TRILOY 210NHF GRADE

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## DESCRIPTION

▪ TRILOY 210NHF resins are easy-flow flame-retardant blends of Samyang TRIREX polycarbonate and ABS. The flame-retardant additive in these grades is antimony /bromine/chlorine-free. 210NH is the higher-flow grade and exhibits higher heat resistance and higher impact strength. These resins are naturally opaque and are supplied in pellet form for injection molding applications.

## CHARACTERISTICS

- High impact resistance
- High heat performance
- Very good flow
- Good dimensional stability
- UL94 V-0@1.5mm, 5VB@ 2.5mm
- Good weather resistance

## APPLICATIONS

- TRILOY 210NHF resin combines stiffness, toughness, and excellent color stability to fluorescent light or filtered sunlight in an office environment. This resin is used mainly in housings for computers, printers, copiers, and general office equipment and in the electrical/electronic market..

# TYPICAL DATA OF TRILOY 210NHF GRADE

PROPERTY	UNIT	ASTM METHOD	TYPICAL DATA
<b>PHYSICAL</b>			
Specific Gravity	—	D792	1.18
Water Absorption (24 hours at 23°C)	%	D570	0.2
Melt Flow Rate (260°C, 2.16kg)	g/10min	D1238	25
<b>MECHANICAL</b>			
Tensile Strength at break	kg <sub>f</sub> /cm <sup>2</sup>	D638	640
Tensile Elongation at break	%	D638	100
Flexural Strength at yield	kg <sub>f</sub> /cm <sup>2</sup>	D790	900
Flexural Modulus	kg <sub>f</sub> /cm <sup>2</sup>	D790	26,000
Izod Impact Strength, notched, 23°C (1/8")	kg <sub>f</sub> ·cm/cm	D256	53
Rockwell Hardness	R scale	D785	116
<b>THERMAL</b>			
HDT, 4.6 kg <sub>f</sub> /cm <sup>2</sup>	°C	D648	90
HDT, 18.6 kg <sub>f</sub> /cm <sup>2</sup>	°C	D648	92
Coefficient of Linear Thermal Expansion	mm/mm/°C	D696	8.3X10 <sup>-5</sup>
<b>ELECTRICAL</b>			
Volume Resistivity	Ω·cm	D257	9X10 <sup>16</sup>
Dielectric Strength	kV/mm	D149	30
Dielectric Constant	—	D150	3
Dissipation Factor	—	D150	0.009
ARC Resistance	Sec	D495	120
<b>OTHERS</b>			
UL-94 V-0 Class Rated (tasted thickness)	mm	(UL 94)	1.5
UL-94 5VB Rated (tasted thickness)	mm	(UL 94)	2.5
Mold Shrinkage (3mm thickness)	%	D955	0.4~0.6

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 TRILOY 210NHF GRADE



General processing conditions for TRILOY 210NHF are shown below. Drying prior to processing is essential to ensure desired appearance and property performance.

SPECIFICATION	UNIT	CONDITIONS
Drying Temperature	°C	90
Drying Time	hr	3~4
Moisture Content, Max	%	0.02
Melt Temperature	°C	240 ~ 270
Nozzle Temperature	°C	240 ~ 270
Front Temperature	°C	240 ~ 270
Middle Temperature	°C	220 ~ 265
Rear Temperature	°C	220 ~ 250
Mold Temperature	°C	80 ~ 100
Injection Pressure	MPa	50 ~ 80
Injection Speed	%	30 ~ 60 (slow to moderate)
Injection Cushion	mm	3 ~ 6
Hold Pressure	MPa	35 ~ 60
Back Pressure	MPa	0.4 ~ 0.6
Screw Speed	rpm	50 ~ 60
Vent Depth	mm	3 ~ 6

## 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, Krea / TEL 82-63-210-6660 / FAX 82-63-210-6677

## SAMYANG KASEI

409 Palbok-dong 3-ga, Deokjin-gu, Jeonju, Krea / 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