NORYL GTX™ Resin GTX810 - Americas

(PPE+PA*)-GF10 — Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL GTX™ 810 resin is a 10% glass reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade has high stiffness (flexural modulus 3000 MPa), excellent chemical resistance, and high heat resistance. NORYL GTX GTX810 resin is an excellent candidate for a wide variety of applications including electrical and lighting components, security (CCTV) housings.

UL Yellow Card Link E121562-101009449

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**11**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0.7**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.0**	%	ISO 294-4, 2577
ASTM Data			
Melt Flow Index, MFI	**12**	g/10min	ASTM D 1238
Temperature	**280**	°C	-
Load	**5**	kg	-
Mold Shrinkage, MD	**0.66**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.99**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**4200**	MPa	ISO 527
Yield stress	**102**	MPa	ISO 527
Yield strain	**3.9**	%	ISO 527
Stress at break	**95**	MPa	ISO 527
Strain at break	**5.2**	%	ISO 527
Flexural modulus	**3900**	MPa	ISO 178
Charpy impact strength, +23°C	**60**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**6.5**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C, 4mm	**85**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	**6.8**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**4050**	MPa	ASTM D 638
Tensile Strength at Yield	**96**	MPa	ASTM D 638
Tensile Strength at Break	**91**	MPa	ASTM D 638
Elongation at Yield	**4**	%	ASTM D 638
Elongation at Break	**5.5**	%	ASTM D 638
Flexural Modulus	**3950**	MPa	ASTM D 790
Rockwell Hardness	**R 119**	-	ASTM D 785
Izod Impact notched, 1/8 in	**80**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**53**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**740**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**192**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**241**	°C	ISO 75-1/-2
Vicat softening temperature, A	**250**	°C	ISO 306
Vicat softening temperature, B	**221**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**44**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**87**	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
ASTM Data			
DTUL @ 66 psi	**239**	°C	ASTM D 648
DTUL @ 264 psi	**201**	°C	ASTM D 648
Vicat Temperature	**221**	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	**2.12**	%	Sim. to ISO 62
Density	**1180**	kg/m³	ISO 1183
Density	**1160**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**95 - 105**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.07**	%	-
Melt temperature	**280 - 305**	°C	-
Mold temperature	**75 - 120**	°C	-
Zone 1	**265 - 305**	°C	-
Zone 2	**270 - 305**	°C	-
Zone 3	**275 - 305**	°C	-
Screw speed	**20 - 100**	rpm	-
Back pressure	**0.3 - 1.4**	MPa	-

Characteristics

Processing
Injection Molding

Applications
Automotive

Regional Availability
North America