NORYL™ Resin GFN1720 - Asia

(PPE+PS)-GF20 — Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL™ GFN1720 resin is a 20% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade was developed for high heat applications and exhibits a good balance of heat resistance, strrength, and electrical performance. NORYL GFN1720 resin is an excellent candidate for applications requirinng electrically insulating properties, such as ignition coils and bobbins.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**11**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**10**	kg	-
ASTM Data			
Melt Flow Index, MFI	**4.5**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**6000**	MPa	ISO 527
Yield stress	**90**	MPa	ISO 527
Yield strain	**2**	%	ISO 527
Stress at break	**90**	MPa	ISO 527
Strain at break	**2**	%	ISO 527
Flexural modulus	**4500**	MPa	ISO 178
Charpy impact strength, +23°C	**25**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**25**	kJ/m²	ISO 179/1eU
Izod impact strength, +23°C, 4mm	**25**	kJ/m²	ISO 180/1U
Izod impact strength, -30°C, 4mm	**25**	kJ/m²	ISO 180/1U
Ball indentation hardness	**100**	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	**5500**	MPa	ASTM D 638
Tensile Strength at Yield	**90**	MPa	ASTM D 638
Tensile Strength at Break	**90**	MPa	ASTM D 638
Elongation at Yield	**2.5**	%	ASTM D 638
Elongation at Break	**3**	%	ASTM D 638
Flexural Modulus	**4800**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**60**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**50**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, A	**180**	°C	ISO 306
Vicat softening temperature, B	**170**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**180**	°C	ISO 306
Thermal Conductivity	**0.26**	W/(m K)	DIN 52616
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (3)	**3.2**	mm	-
ASTM Data			
DTUL @ 264 psi	**171**	°C	ASTM D 648
Vicat Temperature	**181**	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	**2.6**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**20**	E-4	IEC 62631-2-1
Volume resistivity	**1E13**	Ohm*m	IEC 62631-3-1
Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2
Electric strength	**30**	kV/mm	IEC 60243-1

Comparative tracking index	**200**	-	IEC 60112

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.15**	%	Sim. to ISO 62
Humidity absorption	**0.06**	%	Sim. to ISO 62
Density	**1240**	kg/m³	ISO 1183
Density	**1240**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**110 - 120**	°C	-
Pre-drying - Time	**2 - 4**	h	-
Melt temperature	**290 - 330**	°C	-
Mold temperature	**80 - 120**	°C	-
Feed temperature	**60 - 80**	°C	-
Zone 1	**270 - 290**	°C	-
Zone 2	**290 - 310**	°C	-
Zone 3	**310 - 330**	°C	-

Characteristics

Processing
Injection Molding

Regional Availability
Asia Pacific