NORYL GTX™ Resin GTX942 - Americas

(PPE+PA*) Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL GTX™ 942 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits high melt flow, excellent chemical resistance and paintability. NORYL GTX942 resin was designed for large part / thin wall applications.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**17**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**5**	kg	-
Density of melt	**952**	kg/m³	-
Thermal conductivity of melt	**0.2**	W/(m K)	-
Spec. heat capacity of melt	**2080**	J/(kg K)	-
Ejection temperature	**186**	°C	-
ASTM Data			
Melt Flow Index, MFI	**18.5**	g/10min	ASTM D 1238
Temperature	**280**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2580**	MPa	ISO 527
Yield stress	**58**	MPa	ISO 527
Yield strain	**7.1**	%	ISO 527
Stress at break	**54**	MPa	ISO 527
Strain at break	**50**	%	ISO 527
Flexural modulus	**2220**	MPa	ISO 178
Charpy notched impact strength, +23°C	**23**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	**22**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**15**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**2440**	MPa	ASTM D 638
Tensile Strength at Yield	**58**	MPa	ASTM D 638
Tensile Strength at Break	**54**	MPa	ASTM D 638
Elongation at Yield	**4.6**	%	ASTM D 638
Elongation at Break	**43.9**	%	ASTM D 638
Flexural Modulus	**2260**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**265**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**117**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 0.45 MPa	**154**	°C	ISO 75-1/-2
Vicat softening temperature, B	**169**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**169**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**121**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**71.5**	E-6/K	ISO 11359-1/-2
ASTM Data			
DTUL @ 66 psi	**160**	°C	ASTM D 648
Vicat Temperature	**171**	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	**1.01**	%	Sim. to ISO 62
Humidity absorption	**0.52**	%	Sim. to ISO 62
Density	**1090**	kg/m³	ISO 1183
Density	**1090**	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	**275 - 300**	°C	-
Mold temperature	**65 - 95**	°C	-
Zone 1	**260 - 300**	°C	-
Zone 2	**265 - 300**	°C	-
Zone 3	**270 - 300**	°C	-
Screw speed	**20 - 100**	rpm	-
Back pressure	**0.3 - 1.4**	MPa	-

Characteristics

Processing
Injection Molding

Regional Availability
North America

Applications
Automotive