

Product Texts

NORYL GTX™ 944 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits high heat resistance along with improved processibility and increased impact performance. NORYL GTX944 resin may be an excellent candidate for Firefighter Helmet applications.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	12	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	12.5	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2000	MPa	ISO 527
Yield stress	50	MPa	ISO 527
Yield strain	3.5	%	ISO 527
Stress at break	45	MPa	ISO 527
Strain at break	50	%	ISO 527
Flexural modulus	1900	MPa	ISO 178
Charpy notched impact strength, +23°C	55	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	25	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	55	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	25	kJ/m ²	ISO 180/1A
Ball indentation hardness	75	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	1900	MPa	ASTM D 638
Tensile Strength at Yield	50	MPa	ASTM D 638
Tensile Strength at Break	45	MPa	ASTM D 638
Elongation at Yield	6	%	ASTM D 638
Elongation at Break	100	%	ASTM D 638
Flexural Modulus	1950	MPa	ASTM D 790
Izod Impact notched, 1/8 in	680	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	280	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, A	240	°C	ISO 306
Vicat softening temperature, B	180	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	185	°C	ISO 306
Coeff. of linear therm. expansion, parallel	90	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	90	E-6/K	ISO 11359-1/-2
Thermal Conductivity	0.24	W/(m K)	DIN 52616
ASTM Data			
DTUL @ 66 psi	185	°C	ASTM D 648
Vicat Temperature	180	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	2.7	-	IEC 62631-2-1
Dissipation factor, 1MHz	240	E-4	IEC 62631-2-1
Volume resistivity	2.2E11	Ohm*m	IEC 62631-3-1
Comparative tracking index	600	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	3.5	%	Sim. to ISO 62
Humidity absorption	1.2	%	Sim. to ISO 62
Density	1070	kg/m ³	ISO 1183
Density	1080	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 120	°C	-
Pre-drying - Time	2 - 3	h	-
Processing humidity	≤0.07	%	-
Melt temperature	290 - 320	°C	-
Mold temperature	80 - 120	°C	-
Feed temperature	60 - 80	°C	-
Zone 1	260 - 280	°C	-
Zone 2	280 - 300	°C	-
Zone 3	290 - 320	°C	-

Characteristics

Processing

Injection Molding

Regional Availability

North America

Applications

Automotive