

**Product Texts**

NORYL GTX™ 973 resin is a conductive, non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade is optimized to allow for in- or on-line primer-less electrostatic and powder coat painting. NORYL GTX973 resin exhibits high impact resistance and strength and is an excellent candidate for automotive painted applications such as body panels, fenders, and tank flaps.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	12	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
Density of melt	945	kg/m <sup>3</sup>	-
Thermal conductivity of melt	0.22	W/(m K)	-
Spec. heat capacity of melt	2610	J/(kg K)	-
Ejection temperature	240	°C	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	20	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	4	%	ISO 527
Stress at break	55	MPa	ISO 527
Strain at break	30	%	ISO 527
Flexural modulus	2300	MPa	ISO 178
Charpy notched impact strength, +23°C	15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	15	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	7	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	2200	MPa	ASTM D 638
Tensile Strength at Yield	60	MPa	ASTM D 638
Tensile Strength at Break	55	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	55	%	ASTM D 638
Flexural Modulus	2300	MPa	ASTM D 790
Izod Impact notched, 1/8 in	130	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	80	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Vicat softening temperature, B	195	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	200	°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
<b>ASTM Data</b>			
DTUL @ 66 psi	195	°C	ASTM D 648
Vicat Temperature	200	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	4.2	%	Sim. to ISO 62
Humidity absorption	1.2	%	Sim. to ISO 62
Density	1100	kg/m <sup>3</sup>	ISO 1183
Density	1090	kg/m <sup>3</sup>	ASTM D 792

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

**Characteristics**

**Processing**

Injection Molding

**Regional Availability**

Asia Pacific

**Applications**

Automotive