

**Product Texts**

NORYL GTX™ 820 resin is a 20% glass reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade has high stiffness (flexural modulus 4000 MPa), excellent chemical resistance, and high heat resistance. NORYL GTX GTX830 resin is an excellent candidate for a wide variety of applications including valves for water management.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	7.1	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9	%	ISO 294-4, 2577
<b>ASTM Data</b>			
Melt Flow Index, MFI	7	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.27	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.93	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	6400	MPa	ISO 527
Stress at break	139	MPa	ISO 527
Strain at break	3.6	%	ISO 527
Flexural modulus	5960	MPa	ISO 178
Charpy impact strength, +23°C	62	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	8.7	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C, 4mm	86	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	8.8	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	6350	MPa	ASTM D 638
Tensile Strength at Break	133	MPa	ASTM D 638
Elongation at Break	3.6	%	ASTM D 638
Flexural Modulus	6030	MPa	ASTM D 790
Rockwell Hardness	R 119	-	ASTM D 785
Izod Impact notched, 1/8 in	93	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	900	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	211	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	248	°C	ISO 75-1/-2
Vicat softening temperature, A	252	°C	ISO 306
Vicat softening temperature, B	229	°C	ISO 306
Coeff. of linear therm. expansion, parallel	27	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	78	E-6/K	ISO 11359-1/-2
<b>ASTM Data</b>			
Vicat Temperature	231	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	1.88	%	Sim. to ISO 62
Density	1250	kg/m <sup>3</sup>	ISO 1183
Density	1240	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	95 - 105	°C	-
Pre-drying - Time	3 - 4	h	-

**NORYL GTX™ Resin GTX820 - Americas**

(PPE+PA\*)-GF20

Saudi Basic Industries Corporation (SABIC)

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

**Regional Availability**

North America

**Applications**

Automotive