NORYL GTX™ RESIN GTX820

REGION ASIA

DESCRIPTION

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.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	117	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	117	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	7	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	194	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	5960	MPa	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	80	J/m	ASTM D 256
Izod Impact, notched, -30°C	53	J/m	ASTM D 256
THERMAL			
Vicat Softening Temp, Rate B/50	248	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	254	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	232	°C	ASTM D 648
CTE, -20°C to 150°C, flow	0.0000306 – 0.0000396	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.24	-	ASTM D 792
Density	1.245	g/cm³	ASTM D 792
Water Absorption, 24 hours	0.5	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	1	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.65 – 0.85	%	SABIC method
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.07	%	
Minimum Moisture Content	0.02	%	
Melt Temperature	280 – 305	°C	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	275 – 305	°C	
Middle - Zone 2 Temperature	270 – 305	°C	
Rear - Zone 1 Temperature	265 – 305	°C	
Mold Temperature	75 – 120	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Back Pressure	0.3 – 1.4	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 50	%	
Vent Depth	0.013 – 0.038	mm	

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