NORYL GTX™ RESIN GTX9400W

REGION AMERICAS

DESCRIPTION

NORYL GTX™ 9400W resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA) that exhibits high heat resistance, high flow, and added mold release. NORYL GTX9400W resin is injection moldable and an excellent candidate for automotive under-the-hood applications such as power distribution boxes, relay boxes, connectors, sensors, and fuse box covers.

TYPICAL PROPERTY VALUES

Revision 20190726

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	64	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	11	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D 638
Tensile Modulus, 50 mm/min	1950	MPa	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	100	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2350	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	69	MPa	ISO 527
Tensile Strain, break, 5 mm/min	39	%	ISO 527
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	849	J/m	ASTM D 4812
Izod Impact, unnotched, -30°C	768	J/m	ASTM D 4812
Izod Impact, notched, 23°C	256	J/m	ASTM D 256
Izod Impact, notched, -30°C	112	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	43	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	15	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	21	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	15	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	13	kJ/m²	ISO 180/1A
THERMAL			
Vicat Softening Temp, Rate B/50	212	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	190	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	83	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.22E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.42E-04	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50	203	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	187	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	78	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	1.2 – 1.4	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	1.1 – 1.4	%	SABIC method

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 280°C/5.0 kgf	97	g/10 min	ASTM D 1238
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	270 – 295	°C	
Nozzle Temperature	270 – 295	°C	
Front - Zone 3 Temperature	265 – 295	°C	
Middle - Zone 2 Temperature	260 – 295	°C	
Rear - Zone 1 Temperature	255 – 295	°C	
Mold Temperature	65 – 95	°C	
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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