NORYL GTX™ RESIN GTX909

REGION ASIA

DESCRIPTION

NORYL GTX™ 909 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits high impact performance, high heat resistance, and excellent chemical resistance. NORYL GTX909 resin may be an excellent candidate for various exterior automotive applications such as door handles and wheel covers.

TYPICAL PROPERTY VALUES

Revision 20190114

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	66	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	9	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	99	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2370	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	176	J/m	ASTM D 256
Izod Impact, notched, -30°C	106	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	40	J	ASTM D 3763
Instrumented Impact Energy @ peak, -30	24	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	245	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	204	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	125	°C	ASTM D 648
CTE, -20°C to 150°C, flow	9.54E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	8.1E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.13	-	ASTM D 792
Water Absorption, 24 hours	0.54	%	ASTM D 570
Water Absorption, equilibrium, 23C	4.4	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	1.3 – 1.7	%	SABIC method
ELECTRICAL			
Volume Resistivity	4.4E+16	Ohm-cm	ASTM D 257
Surface Resistivity	1.7E+16	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	25.5	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.27	-	ASTM D 150
Relative Permittivity, 1 MHz	2.76	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.039	-	ASTM D 150
Dissipation Factor, 1 MHz	0.019	-	ASTM D 150
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	3 – 4	hrs	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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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