NORYL GTX™ RESIN GTX910

REGION ASIA

DESCRIPTION

NORYL GTX™ 910 resin is non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). NORYL GTX910 resin exhibits excellent chemical resistance and is an excellent candidate for automotive applications such as plastic/metal hybrid components, rail extensions, crash cans, wheel covers, and energy absorbers.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	60	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	95	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2240	MPa	ASTM D 790
Hardness, Rockwell R	116	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	240	J/m	ASTM D 256
Izod Impact, notched, -30°C	133	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	50	J	ASTM D 3763
Instrumented Impact Energy @ peak, -30	39	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	232	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	193	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	143	°C	ASTM D 648
CTE, -40°C to 95°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	9.E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.26E-04	1/°C	ASTM E 831
CTE, 60°C to 138°C, xflow	1.26E-04	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Density	1.107	g/cm³	ASTM D 792
Water Absorption, 50% RH, equilib	1	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	0.5	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	1.1 – 1.3	%	SABIC method
Mold Shrink, flow, annealed 130C 1hr	1.6 – 1.8	%	ASTM D 955
Mold Shrinkage, xflow, 3.2 mm	1 – 1.2	%	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	%	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	
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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