

NORYL GTX™ RESIN GTX942

REGION AMERICAS

DESCRIPTION

NORYL GTX GTX942 Resin is a blend of Polyphenylene Ether(PPE) + Polyamide(PA) resin that is designed to have high melt flow for large part/thinwall injection molding. The material is designed to have the excellent chemical resistance and paintability as other NORYL GTX Resins.

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	54	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	43.9	%	ASTM D 638
Tensile Modulus, 5 mm/min	2440	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	87	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2260	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	54	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7.1	%	ISO 527
Tensile Strain, break, 50 mm/min	58.2	%	ISO 527
Tensile Modulus, 1 mm/min	2580	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	88	MPa	ISO 178
Flexural Modulus, 2 mm/min	2220	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	265	J/m	ASTM D 256
Izod Impact, notched, -30°C	117	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	46	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	22	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	23	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	171	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	160	°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	7.E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	1.E-04	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	5.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	169	°C	ISO 306
Vicat Softening Temp, Rate B/120	169	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	154	°C	ISO 75/Bf
PHYSICAL			
Specific Gravity	1.09	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	1.13 – 1.26	%	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 280°C/5.0 kgf	18.5	g/10 min	ASTM D 1238
Density	1.09	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	1.01	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.52	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	17	cm ³ /10 min	ISO 1133
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	275 – 300	°C	
Nozzle Temperature	275 – 300	°C	
Front - Zone 3 Temperature	270 – 300	°C	
Middle - Zone 2 Temperature	265 – 300	°C	
Rear - Zone 1 Temperature	260 – 300	°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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