NORYL GTX™ RESIN GTX942

REGION AMERICAS

DESCRIPTION

NORYL GTX™ 942 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits high melt flow, excellent chemical resistance and paintability. NORYL GTX942 resin was designed for large part / thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20190925

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/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	23	kJ/m²	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

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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/cm³	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	cm³/10 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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