

NORYL GTX™ RESIN GTX942

REGION AMERICAS

DESCRIPTION

NORYL GTX942 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.

GENERAL INFORMATION

Features	Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PA (PPE+Nylon)
Processing Techniques	Injection Molding

INDUSTRY

Automotive
Building and Construction
Electrical and Electronics

SUB INDUSTRY

Heavy Truck, Recreational/Specialty Vehicles
Building Component
Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	54	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4.6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	43.9	%	ASTM D638
Tensile Modulus, 5 mm/min	2440	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	87	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2260	MPa	ASTM D790
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 ⁽¹⁾			
Izod Impact, notched, 23°C	265	J/m	ASTM D256
Izod Impact, notched, -30°C	117	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	46	J	ASTM D3763
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

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CHEMISTRY THAT MATTERS™

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	23	kJ/m ²	ISO 179/1eA
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate B/50	171	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	160	°C	ASTM D648
CTE, -40°C to 95°C, flow	9.E-05	1/°C	ASTM E83 1
CTE, -40°C to 95°C, xflow	7.E-05	1/°C	ASTM E83 1
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 ⁽¹⁾			
Specific Gravity	1.09	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	1.13 – 1.26	%	SABIC method
Melt Flow Rate, 280°C/5.0 kgf	18.5	g/10 min	ASTM D1238
Density	1.09	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	1.01	%	ISO 62-1
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 ⁽³⁾			
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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.



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