

NORYL GTX™ RESIN GTX202

REGION AMERICAS

DESCRIPTION

NORYL GTX202 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits excellent chemical resistance and excellent paintability.

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	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Exteriors, Recreational/Specialty Vehicles
Consumer	Personal Recreation

TYPICAL PROPERTY VALUES

PROPERTIES TYPICAL VALUES UNITS **TEST METHODS** MECHANICAL (1) Tensile Stress, break, 5 mm/min 54 MPa ISO 527 Tensile Strain, break, 5 mm/min 46 % ISO 527 Tensile Modulus, 1 mm/min @ 120°C 2154 150 527 MPa Flexural Modulus, 2 mm/min 2227 MPa ISO 178 Tensile Modulus, 5 mm/min 2173 MPa ASTM D638 Tensile Strain, brk, Type I, 5 mm/min 38 ASTM D638 % Tensile Stress, brk, Type I, 50 mm/min 56 MPa ASTM D638 Tensile Strain, yld, Type I, 50 mm/min 9 % ASTM D638 Tensile Stress, yld, Type I, 50 mm/min 59 MPa ASTM D638 Tensile Strain, brk, Type I, 50 mm/min 52 % ASTM D638 Tensile Stress, brk, Type I, 5 mm/min 52 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 2120 ASTM D790 MPa 89 ASTM D790 Flexural Stress, yld, 2.6 mm/min, 100 mm span MPa Flexural Modulus, 2.6 mm/min, 100 mm span 2240 MPa ASTM D790 Hardness, Rockwell R 118 ASTM D785 Taber Abrasion, CS-17, 1 kg 19 mg/1000cy ASTM D1044 IMPACT (1) Izod Impact, notched 80*10*4 +23°C 18 kJ/m² ISO 180/1A Izod Impact, unnotched 80*10*4 +23°C DB kJ/m² ISO 180/1U Izod Impact, notched, 23°C 167 J/m ASTM D256 ASTM D256 Izod Impact, notched, -40°C 53 J/m

© 2024 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS

Revision 20241015



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, -30°C	117	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	19	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	DB	kJ/m²	ISO 179/1eU
Izod Impact, unnotched, -30°C	3204	J/m	ASTM D4812
Izod Impact, unnotched, -40°C	3204	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	46	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, -30°C	36	J	ASTM D3763
Instrumented Impact Energy @ peak, -40°C	19	J	ASTM D3763
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate A/50	235	°C	ISO 306
Vicat Softening Temp, Rate B/50	166	°C	ISO 306
Vicat Softening Temp, Rate A/50	232	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	167	°C	ASTM D1525
HDT, 0.45 MPa, 6.4 mm, unannealed	155	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	127	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	113	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	154	°C	ISO 75/Bf
CTE, 23°C to 80°C, flow	9.30E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, xflow	9.30E-05	1/°C	ASTM E831
CTE, -20°C to 150°C, flow	9.00E-05	1/°C	ASTM E831
PHYSICAL ⁽¹⁾			
Specific Gravity	1.08		ASTM D792
Mold Shrinkage, flow, 24 hrs ⁽²⁾	1.03	%	ASTM D955
Density	1.09	g/cm ³	ISO 1183
Water Absorption, (23°C/Saturated)	3.6	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.4	%	ASTM D570
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Moisture Absorption (23°C / 50% RH)	0.57	%	ISO 62
Water Absorption, (23°C/saturated)	2.02	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs ⁽²⁾	1.03	%	ISO 294
Mold Shrinkage, rlow, 24 hrs ⁽²⁾	1.12	%	ISO 294
Mold Shrink, flow, annealed 130C 1hr ⁽²⁾ Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1.1 – 1.5 1.12	%	ASTM D955 ASTM D955
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	0.9 – 1.2	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽²⁾	0.8 – 1.1	%	SABIC method
Melt Volume Rate, MVR at 280°C/5.0 kg	12	cm³/10 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	

© 2024 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.