

NORYL GTX™ RESIN GTX974

REGION AMERICAS

DESCRIPTION

NORYL GTX974 resin is a conductive, non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade is optimized to allow for in- or on-line primer-less electrostatic painting. NORYL GTX974 resin exhibits high impact resistance and is an excellent candidate for automotive painted applications such as body panels and fenders.

GENERAL INFORMATION

Features

Chemical Resistance, Electrically Conductive, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Aesthetics/Visual effects, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added

Fillers

Conductive agent

Polymer Types

Polyphenylene Ether + PA (PPE+Nylon)

Processing Techniques

Injection Molding

INDUSTRY

Automotive

SUB INDUSTRY

Automotive Exteriors

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D638
Tensile Modulus, 50 mm/min	2050	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	80	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2050	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	30	%	ISO 527
Tensile Modulus, 1 mm/min	2000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	1900	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	180	J/m	ASTM D256
Izod Impact, notched, -30°C	120	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	50	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°C	17	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	18	kJ/m²	ISO 179/1eA

© 2023 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate B/50	180	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	180	°C	ASTM D648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E83 1
CTE, -40°C to 40°C, xflow	1.E-04	1/°C	ASTM E83 1
CTE, 23°C to 60°C, flow	1.E-04	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	230	°C	ISO 306
Vicat Softening Temp, Rate B/50	175	°C	ISO 306
Vicat Softening Temp, Rate B/120	180	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	175	°C	ISO 75/Be
PHYSICAL ⁽¹⁾			
Specific Gravity	1.08	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	1.3 – 1.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽²⁾	1.1 – 1.4	%	SABIC method
Melt Flow Rate, 280°C/5.0 kgf	10	g/10 min	ASTM D1238
Density	1.08	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	4.2	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	1.2	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	12	cm ³ /10 min	ISO 1133
ELECTRICAL ⁽¹⁾			
Volume Resistivity	1.E+03 – 1.E+04	Ω.cm	SABIC method
FLAME CHARACTERISTICS ⁽³⁾			
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 3	Hrs	
Maximum Moisture Content	0.07	%	
Melt Temperature	290 – 320	°C	
Nozzle Temperature	280 – 310	°C	
Front - Zone 3 Temperature	290 – 320	°C	
Middle - Zone 2 Temperature	280 – 300	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	100 – 120	°C	

(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) 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.

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.