

NORYL GTX™ Resin GTX934 - Europe

Polyphenylene Ether + PS + PA

SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

NORYL GTX934 resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade exhibits improved processability and excellent heat aging performance. NORYL GTX934 resin was designed for high heat automotive under-the-hood applications.

General

Material Status	• Commercial: Active		
Literature ¹	<ul style="list-style-type: none"> • NORYL Resin - Chemical Resistance Properties • Primerless in- and on-line Painting conductive NORYL GTX™ Resins • SABIC NORYL Resin Injection Molding Processing Guide 		
UL Yellow Card ²	• E45329-100066674		
Search for UL Yellow Card	<ul style="list-style-type: none"> • SABIC • NORYL GTX™ Resin 		
Availability	• Europe		
Features	<ul style="list-style-type: none"> • Chemical Resistant • Good Dimensional Stability • Good Impact Resistance • High Heat Resistance 	<ul style="list-style-type: none"> • High Stiffness • High Strength • Hydrolytically Stable • Low Moisture Absorption 	<ul style="list-style-type: none"> • Low Shrinkage • Low Specific Gravity • Low Warpage
Uses	• Automotive Under the Hood	• Electrical Parts	• Electrical/Electronic Applications
Processing Method	• Injection Molding		
Also Available In	• Asia Pacific	• Latin America	• North America

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.09 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	13 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	13 cm ³ /10min	ISO 1133
Molding Shrinkage		Internal Method
Flow ⁴	1.6 to 2.0 %	
Across Flow : 3.20 mm	1.1 to 1.4 %	
Flow : 3.20 mm	1.4 to 1.7 %	
Water Absorption		ISO 62
Saturation, 23°C	3.5 %	
Equilibrium, 23°C, 50% RH	1.2 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- ⁵	2300 MPa	ASTM D638
--	2400 MPa	ISO 527-1/1
Tensile Strength		
Yield ⁶	65.0 MPa	ASTM D638
Yield	65.0 MPa	ISO 527-2/50
Break ⁶	55.0 MPa	ASTM D638
Break	55.0 MPa	ISO 527-2/50
Tensile Elongation		
Yield ⁶	5.0 %	ASTM D638
Yield	4.5 %	ISO 527-2/50
Break ⁶	60 %	ASTM D638
Break	25 %	ISO 527-2/50
Flexural Modulus		
50.0 mm Span ⁷	2350 MPa	ASTM D790
-- ⁸	2200 MPa	ISO 178



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Mechanical	Nominal Value Unit	Test Method
Flexural Stress		
-- 8, 9	90.0 MPa	ISO 178
Yield, 50.0 mm Span ⁷	95.0 MPa	ASTM D790
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ¹⁰		ISO 179/1eA
-30°C	10 kJ/m ²	
23°C	20 kJ/m ²	
Notched Izod Impact		
-30°C	100 J/m	ASTM D256
23°C	220 J/m	ASTM D256
-30°C ¹¹	10 kJ/m ²	ISO 180/1A
23°C ¹¹	20 kJ/m ²	ISO 180/1A
Instrumented Dart Impact		ASTM D3763
23°C, Total Energy	60.0 J	
Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	85.0 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
0.45 MPa, Unannealed, 3.20 mm	190 °C	ASTM D648
0.45 MPa, Unannealed, 4.00 mm, 100 mm Span ¹²	190 °C	ISO 75-2/Be
Vicat Softening Temperature		
--	205 °C	ASTM D1525 ¹³ ISO 306/B120 ¹³
--	200 °C	ISO 306/B50
--	250 °C	ISO 306/A50
Ball Pressure Test (123 to 127°C)	Pass	IEC 60695-10-2
CLTE		
Flow : -40 to 40°C	7.5E-5 cm/cm/°C	ASTM E831
Flow : 23 to 60°C	8.0E-5 cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	8.5E-5 cm/cm/°C	ASTM E831
Transverse : 23 to 60°C	7.0E-5 cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.23 W/m/K	ISO 8302
RTI Elec	100 °C	UL 746B
RTI Imp	100 °C	UL 746B
RTI Str	85.0 °C	UL 746B
Electrical	Nominal Value Unit	Test Method
Comparative Tracking Index ¹⁴	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating (> 1.5 mm)	HB	UL 94
Glow Wire Flammability Index		IEC 60695-2-12
0.75 mm	700 °C	
1.0 mm	700 °C	
1.5 mm	700 °C	
2.5 mm	700 °C	
3.0 mm	700 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.75 mm	725 °C	
1.0 mm	725 °C	
1.5 mm	725 °C	
2.5 mm	725 °C	
3.0 mm	725 °C	



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Injection	Nominal Value Unit
Drying Temperature	100 to 120 °C
Drying Time	2.0 to 3.0 hr
Suggested Max Moisture	0.070 %
Hopper Temperature	60 to 80 °C
Rear Temperature	260 to 280 °C
Middle Temperature	280 to 300 °C
Front Temperature	290 to 320 °C
Nozzle Temperature	280 to 310 °C
Processing (Melt) Temp	290 to 320 °C
Mold Temperature	80 to 120 °C

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Tensile Bar

⁵ 50 mm/min

⁶ Type I, 50 mm/min

⁷ 1.3 mm/min

⁸ 2.0 mm/min

⁹ at Yield

¹⁰ 80*10*4 sp=62mm

¹¹ 80*10*4 mm

¹² 120*10*4 mm

¹³ Rate A (50°C/h), Loading 2 (50 N)

¹⁴ Value shown here is based on internal measurement.



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Where to Buy

Supplier

SABIC

Web: <http://www.sabic.com/>

Distributor

AECTRA

Telephone: +33-4-72-54-36-42

Web: <https://www.aectra.fr/>

Availability: Bulgaria, Romania

AGI-Augusto Guimarães & Irmão

Telephone: +351-22753-7400

Web: <https://www.agi.pt/en/>

Availability: Portugal

GRÄSSLIN

Telephone: +49-7721-4040-261

Web: <https://www.graesslin-kunststoffe.de>

Availability: Germany

Guzmán Polymers

Telephone: +34-963-992-400

Web: <https://www.guzmanglobal.com/en/productos/plastics/>

Availability: Italy, Spain, Turkey

Lenorplastics

Telephone: +41-61-706-11-11

Web: <https://www.lenorplastics.ch>

Availability: Switzerland

Plastoplan

Telephone: +43-1-25040-0

Web: <https://www.plastoplan.com/>

Availability: Austria, Czech Republic, Hungary, Slovakia

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Netherlands, South Africa

