

NORYL GTX™ GTX679 resin

Polyphenylene Ether + PS + Nylon

SABIC Innovative Plastics

Message:

NORYL GTX GTX679 Resin is a blend of Polyphenylene Ether(PPE) + Polyamide(PA) resin that is mineral filled, conductive, and suitable for injection molding. The conductivity level is optimized to allow for primer-less electrostatic painting. GTX679 has improved impact/elongation and the mineral content enables the material to be used in structural applications replacing metal or thermoset resins. The material is only available in black.

General Information			
Filler / Reinforcement	Mineral filler		
Features	Conductivity		
	Impact resistance, good		
	Sprayable		
Uses	Components		
	Metal substitution		
Appearance	Black		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 - 0.90	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	3.6	%	ISO 62
Equilibrium, 23°C, 50% RH	0.70	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4450	MPa	ASTM D638
--	4790	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	64.0	MPa	ASTM D638
Yield	61.0	MPa	ISO 527-2/5
Fracture ³	62.0	MPa	ASTM D638
Fracture	61.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	2.0	%	ISO 527-2/5
Fracture ⁵	4.0	%	ASTM D638

Fracture	5.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	4000	MPa	ASTM D790
-- ⁷	4440	MPa	ISO 178
Flexural Stress			
--	109	MPa	ISO 178
Fracture, 50.0mm span ⁸	108	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	3.8	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	31	J/m	ASTM D256
23°C	39	J/m	ASTM D256
-30°C ¹⁰	3.5	kJ/m ²	ISO 180/1A
23°C ¹¹	4.2	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	7.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	185	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹²	184	°C	ISO 75-2/Bf
Vicat Softening Temperature			
--	185	°C	ASTM D1525, ISO 306/B50 ¹³
--	188	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	6.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	93.3 - 107	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.070	%	
Suggested Shot Size	30 - 50	%	
Rear Temperature	260 - 299	°C	
Middle Temperature	266 - 299	°C	
Front Temperature	271 - 299	°C	
Nozzle Temperature	277 - 299	°C	
Processing (Melt) Temp	277 - 299	°C	
Mold Temperature	65.6 - 93.3	°C	
Back Pressure	0.345 - 1.38	MPa	
Screw Speed	20 - 100	rpm	
Vent Depth	0.013 - 0.038	mm	
Injection instructions			

Minimum Moisture Content: 0.02 %

NOTE

1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	标准 B (120°C/h), 载荷2 (50N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

