

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		
RoHS Compliance	RoHS compliance		
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 10 ¹³
--	188	°C	ISO 306/B120
Linear thermal expansion coefficient			
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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