

NORYL GTX™ GTX975 resin

Polyphenylene Ether + PS + Nylon

SABIC Innovative Plastics Europe

Message:

NORYL GTX975 is a 18% mineral filled material especially designed for in- or on-line painted exterior automotive trim part, e.g. tankflaps and corner panels. This material combines high stiffness and excellent temperature resistance with conductivity for electrostatic painting in an unique way.

General Information			
Filler / Reinforcement	Mineral filler, 18% filler by weight		
Features	Conductivity		
	Rigidity, high		
	Sprayable		
	Heat resistance, high		
Uses	Automotive exterior parts		
	Car exterior decoration		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm ³	ASTM D792
--	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	15	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.80 - 1.2	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	3.5	%	ISO 62
Equilibrium, 23°C, 50% RH	1.1	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4450	MPa	ASTM D638
--	4200	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	69.0	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/5
Fracture ³	68.0	MPa	ASTM D638
Fracture	65.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.5	%	ASTM D638
Yield	3.5	%	ISO 527-2/5

Fracture ⁵	4.5	%	ASTM D638
Fracture	4.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	4000	MPa	ASTM D790
-- ⁷	4000	MPa	ISO 178
Flexural Stress			
--	110	MPa	ISO 178
Yield, 50.0mm span ⁸	113	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	3.0	kJ/m ²	ISO 179/1eA
23°C	3.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	35	kJ/m ²	ISO 179/1eU
23°C	40	kJ/m ²	ISO 179/1eU
Notched Izod Impact			
-30°C	30	J/m	ASTM D256
23°C	35	J/m	ASTM D256
-30°C ¹¹	4.0	kJ/m ²	ISO 180/1A
23°C ¹²	4.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	35	kJ/m ²	ISO 180/1U
23°C	40	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	3.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	210	°C	ASTM D648
0.45 MPa, unannealed, 100 mm span ¹⁴	185	°C	ISO 75-2/Be
Vicat Softening Temperature			
--	215	°C	ASTM D1525 ¹⁵
--	195	°C	ISO 306/B50
--	200	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	5.4E-5	cm/cm/°C	ASTM E831
Flow: 23 to 60°C	5.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 60°C	6.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+3 - 1.0E+4	ohms · cm	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	

Drying Time	2.0 - 3.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	80.0 - 100	°C
Rear Temperature	260 - 280	°C
Middle Temperature	280 - 300	°C
Front Temperature	300 - 320	°C
Nozzle Temperature	280 - 300	°C
Processing (Melt) Temp	300 - 320	°C
Mold Temperature	100 - 120	°C

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 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4
14.	120*10*4 mm
15.	标准 B (120°C/h), 载荷2 (50N)

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