

NORYL GTX™ NX0031 resin

Polyphenylene Ether + PS + Nylon

SABIC Innovative Plastics

Message:

NORYL GTX NX0031 resin is a conductive resin specially designed for electrostatic painting and powder coating applications. This material combines high impact, good flow and conductivity. The material is only available in black and is suitable for injection molding.

General Information			
UL YellowCard	E121562-533883		
Features	Conductivity		
	Impact resistance, high		
	Sprayable		
	Good liquidity		
Appearance	Black		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.09	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	8.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	8.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	1.3 - 1.6	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	4.2	%	ISO 62
Equilibrium, 23°C, 50% RH	1.2	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2250	MPa	ASTM D638
--	2000	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	52.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/50
Fracture ³	48.0	MPa	ASTM D638
Fracture	48.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Fracture ⁵	34	%	ASTM D638
Fracture	30	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2100	MPa	ASTM D790

-- ⁷	1900	MPa	ISO 178
Flexural Stress			
--	75.0	MPa	ISO 178
Yield, 50.0mm span ⁸	79.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	10	kJ/m ²	ISO 179/1eA
23°C	18	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	220	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	20	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	42.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	176	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	136	°C	ASTM D648
Vicat Softening Temperature			
--	175	°C	ASTM D1525, ISO 306/B50 10 ¹²
--	180	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Flow: 23 to 60°C	1.0E-4	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Lateral: 23 to 60°C	9.0E-5	cm/cm/°C	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	254 - 293	°C	
Middle Temperature	260 - 293	°C	
Front Temperature	266 - 293	°C	
Nozzle Temperature	271 - 293	°C	
Processing (Melt) Temp	271 - 293	°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, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)

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