

NORYL™ IGN320 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

20% glass reinforced PPE + PS. High heat, high modulus automotive applications like ignition coils.

General Information	
Filler / Reinforcement	Glass Fiber,20% Filler by Weight
Features	High Heat Resistance
Uses	Automotive Applications
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	Flexural DMA (ASTM D4065)
	Instrumented Impact (Energy) (ASTM D3763)
	Instrumented Impact (Load) (ASTM D3763)
	Pressure-Volume-Temperature (PVT - Zoller Method)
	Shear DMA (ASTM D4065)
	Tensile Creep (ASTM D2990)
	Tensile Fatigue
	Tensile Stress vs. Strain (ASTM D638)
	Thermal Conductivity vs. Temperature (ASTM E1530)
	Viscosity vs. Shear Rate (ASTM D3835)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	13	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.10 to 0.30	%	
Across Flow : 3.20 mm	0.20 to 0.40	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	6260	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	109	MPa	
Break	109	MPa	
Tensile Elongation ³ (Break)	2.4	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	5720	MPa	ASTM D790
Flexural Strength ⁵ (Break, 50.0 mm Span)	170	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	100	J/m	ASTM D256
Unnotched Izod Impact (23°C)	510	J/m	ASTM D4812

Instrumented Dart Impact (23°C, Total Energy)	16.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	164	°C	
1.8 MPa, Unannealed, 3.20 mm	159	°C	
Vicat Softening Temperature	175	°C	ASTM D1525 ⁶
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (1.60 mm, in Oil)	34	kV/mm	ASTM D149
Injection	Nominal Value	Unit	
Drying Temperature	110 to 121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 70	%	
Rear Temperature	266 to 316	°C	
Middle Temperature	277 to 321	°C	
Front Temperature	288 to 327	°C	
Nozzle Temperature	299 to 327	°C	
Processing (Melt) Temp	299 to 327	°C	
Mold Temperature	82.2 to 110	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	20 to 100	rpm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		

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