NORYL™ RESIN IGN320

REGION AMERICAS

DESCRIPTION

NORYL™ IGN320 resin is a 20% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade exhibits high heat resistance, high modulus, very low moisture absorption, and good dimensional stability. NORYL IGN320 resin is an excellent candidate for automotive applications such as ignition coils where heat and high modulus is required.

TYPICAL PROPERTY VALUES

Revision 20190110

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	108	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	108	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D 638
Tensile Modulus, 5 mm/min	6260	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	170	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	5720	MPa	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	512	J/m	ASTM D 4812
Izod Impact, notched, 23°C	101	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	16	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	175	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	164	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	158	°C	ASTM D 648
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.2 – 0.4	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	12.8	g/10 min	ASTM D 1238
ELECTRICAL			
Dielectric Strength, in oil, 1.6 mm	33.9	kV/mm	ASTM D 149
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 325	°C	
Nozzle Temperature	300 – 325	°C	
Front - Zone 3 Temperature	290 – 325	°C	
Middle - Zone 2 Temperature	275 – 320	°C	
Rear - Zone 1 Temperature	265 – 315	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.3 – 0.7	MPa	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	

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