

NORYL™ Resin N300XD

DESCRIPTION

NORYL N300XD resin is a 8% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This grade contains non-halogen flame retardant and has good balance of strength and toughness. NORYL N300XD resin exhibits high heat resistance, dimensional stability, hydrolytic stability, and low moisture absorption. This material is intended for appliance internals, indoor and outdoor electrical enclosures / housings / connectors.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Dielectrics, Low Moisture Absorption, Dimensional stability, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyphenylene ether (PPE)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260914

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, brk, Type I, 5 mm/min	72	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Modulus, 5 mm/min	3650	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	120	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3450	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	72	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
Tensile Modulus, 1 mm/min	3750	MPa	ISO 527
Flexural Strength, 2 mm/min	120	MPa	ISO 178
Flexural Modulus, 2 mm/min	3460	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	105	J/m	ASTM D256
Izod Impact, notched 80*10*4 +23°C	11.2	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	125	°C	ASTM D648
Relative Temp Index, Elec ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	65	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.14	-	ASTM D792
Melt Flow Rate, 300°C/5.0 kgf	12	g/10 min	ASTM D1238
Water Absorption, (23°C/24hrs)	0.08	%	ASTM D570

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm ⁽³⁾	0.65 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽³⁾	0.8 – 0.95	%	SABIC method
ELECTRICAL ⁽¹⁾			
Dielectric Constant			
1.9 GHz	2.74	-	SABIC method
5 GHz	2.72	-	SABIC method
10 GHz	2.75	-	SABIC method
Dissipation Factor			
1.9 GHz	0.00376	-	SABIC method
5 GHz	0.00516	-	SABIC method
10 GHz	0.00390	-	SABIC method
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-10445355	-	-
UL Recognized, 94V-0 Flame Class Rating	6.0 – 6.6	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	100 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	280 – 310	°C	
Nozzle Temperature	280 – 310	°C	
Front - Zone 3 Temperature	270 – 310	°C	
Middle - Zone 2 Temperature	260 – 305	°C	
Rear - Zone 1 Temperature	250 – 300	°C	
Mold Temperature	70 – 110	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses, colors and regions. For details, please see the UL Yellow Card.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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