NORYL™ RESIN LPN170HG

DESCRIPTION

NORYL LPN170HG resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS) designed for high heat resistance, low density, high gloss, low outgassing and good dimensional stability performance. This extrusion and injection moldable grade carries HDT 170°C, special gravity 1.07 g/cm3. This grade is capable for physical vapor deposition with good light distribution and high reflection rate. LPN170HG is targeted for automotive headlamp reflector, bezel, trim, light shielding and other high surface quality / high heat resistance demanded components.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Dimensional stability, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding, Extrusion

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Lighting, Automotive Exteriors
Consumer	Home Appliances

TYPICAL PROPERTY VALUES

Revision 20260818

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	78	MPa	ASTM D638
Tensile Strain, Yield			
Type I, 5 mm/min	5.2	%	ASTM D638
5 mm/min	5.3	%	ISO 527
Tensile Strain, Break			
Type I, 5 mm/min	31.2	%	ASTM D638
5 mm/min	15	%	ISO 527
Tensile Modulus			
5 mm/min	2627	MPa	ASTM D638
1 mm/min	2644	MPa	ISO 527
Flexural Strength, 1.3 mm/min, 50 mm span	124	MPa	ASTM D790
Flexural Modulus			
1.3 mm/min, 50 mm span	2655	MPa	ASTM D790
2 mm/min	2782	MPa	ISO 178
Tensile Stress, yield, 5 mm/min	78	MPa	ISO 527
Flexural Strength, 2 mm/min	125	MPa	ISO 178
IMPACT [1]			
Izod impact, notched			
23°C	30	J/m	ASTM D256
-40°C	35	J/m	ASTM D256
80*10*4 +23°C	4.3	kJ/m²	ISO 180/1A
80*10*4 -40°C	4.3	kJ/m²	ISO 180/1A

© 2026 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, Unnotched			
23°C	791	J/m	ASTM D4812
-40°C	700	J/m	ASTM D4812
80*10*4 +23°C	71.9	kJ/m²	ISO 180/1U
80*10*4 -40°C	42.6	kJ/m²	ISO 180/1U
THERMAL (1)			
HDT, 0.45 MPa, 6.4 mm, unannealed	180	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	170	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	177	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	163	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	5.75E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.93E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Specific Gravity	1.07	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.023	%	ISO 62-1
Melt Flow Rate, 300°C/5.0 kgf	8.7	g/10 min	ASTM D1238
Mold Shrinkage, flow, 3.2 mm (2)	0.83	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm (2)	0.84	%	SABIC method
ELECTRICAL (1)			
Surface Resistivity	9.2E+16	Ω	ASTM D257
Volume Resistivity	9.2E+16	Ω.cm	ASTM D257
OPTICAL PROPERTIES (1)			
Gloss (45°)	101	‰	ASTM D2457
Gloss (60°)	102	‰	ASTM D2457
INJECTION MOLDING (3)			
Drying Temperature	100 – 120	°C	
Drying Time	3 – 5	Hrs	
Melt Temperature	300 – 340	°C	
Nozzle Temperature	300 – 340	°C	
Front - Zone 3 Temperature	300 – 340	°C	
Middle - Zone 2 Temperature	280 – 340	°C	
Rear - Zone 1 Temperature	280 – 340	°C	
Mold Temperature	80 – 150	°C	
Back Pressure	2 – 10	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) 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.

(3) 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.

© 2026 Copyright by SABIC. All rights reserved

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2026 Copyright by SABIC. All rights reserved