

NORYL™ Resin LPN170HG

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

Product Texts

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.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	8.7	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.0083	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.0084	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2640	MPa	ISO 527
Yield stress	78	MPa	ISO 527
Yield strain	5.3	%	ISO 527
Strain at break	15	%	ISO 527
Flexural modulus, 23°C	2780	MPa	ISO 178
Flexural strength	125	MPa	ISO 178
Izod impact strength, +23°C	71.9	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C	4.3	kJ/m ²	ISO 180/1A
Izod notched impact strength	4.3	kJ/m ²	ISO 180/1A
Temperature	-40	°C	-
ASTM Data			
Tensile Modulus	2627	MPa	ASTM D 638
Tensile Strength at Yield	78	MPa	ASTM D 638
Elongation at Yield	5.2	%	ASTM D 638
Elongation at Break	31.2	%	ASTM D 638
Flexural Modulus	2655	MPa	ASTM D 790
Flexural Strength	124	MPa	ASTM D 790
Izod Impact notched, 1/8 in	30	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	35	J/m	ASTM D 256
Temperature	-40	°C	-
Izod Impact unnotched, 1/8 in	791	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	163	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	177	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	57.5	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	59.3	E-6/K	ISO 11359-1/-2
ASTM Data			
DTUL @ 66 psi	180	°C	ASTM D 648
DTUL @ 264 psi	170	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Surface Resistivity	9.2E16	Ohm	ASTM D 257
Volume Resistivity	9.2E16	Ohm*cm	ASTM D 257

Optical properties	Value	Unit	Test Standard
ASTM Data			
Gloss	101	-	ASTM D 2457

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Other properties	Value	Unit	Test Standard
Density	1070	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 120	°C	-
Pre-drying - Time	3 - 5	h	-
Melt temperature	300 - 340	°C	-
Mold temperature	80 - 150	°C	-
Zone 1	280 - 340	°C	-
Zone 2	280 - 340	°C	-
Zone 3	300 - 340	°C	-
Nozzle temperature	300 - 340	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	2 - 10	MPa	-

Characteristics**Processing**

Injection Molding, Other Extrusion

Special Characteristics

Heat stabilized or stable to heat

Features

High Gloss, Light Reflecting, Low Emission

Applications

Automotive, Electrical and Electronical

Regional Availability

North America, Europe, Asia Pacific, South and Central America