NORYL™ Resin NH8006 Europe

(PPE+PS)-GF30 — Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL NH8006 resin is a 30% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable and extrusion grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA and V0 at 2mm along with a UL746C Outdoor Suitability rating of F1. NORYL NH8006 resin offers an exceptional balance of strength and dimensional stability and is an excellent candidate for electrical and electronic applications.

UL Yellow Card E45329-100051184

UL Yellow Card E45329-100100471

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**6**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**10**	kg	-
ASTM Data			
Melt Flow Index, MFI	**2.1**	g/10min	ASTM D 1238
Temperature	**280**	°C	-
Load	**5**	kg	-
Mold Shrinkage, MD	**0.00225**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**9000**	MPa	ISO 527
Yield stress	**125**	MPa	ISO 527
Yield strain	**1.8**	%	ISO 527
Stress at break	**125**	MPa	ISO 527
Strain at break	**1.8**	%	ISO 527
Flexural modulus, 23°C	**8000**	MPa	ISO 178
Charpy notched impact strength, +23°C	**9**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**26**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**8**	kJ/m²	ISO 180/1A
Izod notched impact strength	**8**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**9500**	MPa	ASTM D 638
Tensile Strength at Yield	**125**	MPa	ASTM D 638
Tensile Strength at Break	**125**	MPa	ASTM D 638
Elongation at Yield	**2**	%	ASTM D 638
Elongation at Break	**2**	%	ASTM D 638
Flexural Modulus	**8600**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**85**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**75**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**500**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**149**	°C	ISO 75-1/-2
Vicat softening temperature, B	**156**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**37**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**55**	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	**V-1**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
Yellow Card available	**yes**	-	-
Burning behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**2.0**	mm	-
Yellow Card available	**yes**	-	-

Burning behav. 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**2.0**	mm	-
Yellow Card available	**yes**	-	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**3.2**	mm	-
ASTM Data			
Coefficient of Thermal Expansion, MD	**37**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**55**	E-6/K	ASTM D 696
DTUL @ 264 psi	**149**	°C	ASTM D 648
Vicat Temperature	**156**	°C	ASTM D 1525

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Relative permittivity, 1MHz	**3.1**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**40**	E-4	IEC 62631-2-1
Surface resistivity	**5E17**	Ohm	IEC 62631-3-2
Electric strength	**16**	kV/mm	IEC 60243-1
Comparative tracking index	**212**	-	IEC 60112
ASTM Data			
Dissipation Factor, 1 MHz	**0.004**	-	ASTM D 150
Dielectric Constant, 1 MHz	**3.11**	-	ASTM D 150
Surface Resistivity	**4E17**	Ohm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.23**	%	Sim. to ISO 62
Humidity absorption	**0.07**	%	Sim. to ISO 62
Density	**1340**	kg/m³	ISO 1183
Density	**1330**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**110 - 120**	°C	-
Pre-drying - Time	**2 - 3**	h	-
Melt temperature	**300 - 320**	°C	-
Mold temperature	**100 - 130**	°C	-
Feed temperature	**80 - 100**	°C	-
Zone 1	**260 - 280**	°C	-
Zone 2	**280 - 300**	°C	-
Zone 3	**300 - 320**	°C	-
Nozzle temperature	**280 - 300**	°C	-

Characteristics

Processing
Injection Molding, Other Extrusion

Applications
Electrical and Electronical

Special Characteristics
Flame retardant, Halogen-free

Regional Availability
Europe

Features
Creep Resistance