NORYL™ Resin NH6010B - Americas

(PPE+PS) Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL™ NH6010B resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This high performance, injection moldable and extrusion grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of V0 at 1.5mm. NORYL NH6010B resin features low smoke production upon burning, high heat resistance, very low specific gravity, and compliance to IEC. In addition, this material is heat stabilized and impact modified. It is an excellent candidate for conduit and trunking applications in transportation, building + construction, and electrical markets. *see NORYL LS6010 resin for FAR 25.853 requirements.

UL Yellow Card Link E121562-100050086

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**5**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**5**	kg	-
ASTM Data			
Melt Flow Index, MFI	**5.6**	g/10min	ASTM D 1238
Temperature	**280**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2440**	MPa	ISO 527
Yield stress	**64**	MPa	ISO 527
Yield strain	**4.7**	%	ISO 527
Stress at break	**58**	MPa	ISO 527
Strain at break	**8.3**	%	ISO 527
Flexural modulus	**2360**	MPa	ISO 178
Charpy notched impact strength, +23°C	**20**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	**18**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**14**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**2220**	MPa	ASTM D 638
Tensile Strength at Yield	**64**	MPa	ASTM D 638
Tensile Strength at Break	**53**	MPa	ASTM D 638
Elongation at Yield	**4.6**	%	ASTM D 638
Elongation at Break	**20**	%	ASTM D 638
Flexural Modulus	**2390**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**300**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**181**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**124**	°C	ISO 75-1/-2
Vicat softening temperature, B	**143**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**146**	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
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Glow Wire Ignition Temperature (GWIT)	**775**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**775**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**2**	mm	-
Glow Wire Ignition Temperature (GWIT)	**800**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**3**	mm	-
ASTM Data			
DTUL @ 264 psi	**122**	°C	ASTM D 648

Vicat Temperature	**143**	°C	ASTM D 1525

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Relative permittivity, 1MHz	**2.7**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**29**	E-4	IEC 62631-2-1
Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1
Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2
Comparative tracking index	**225**	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	**34.1**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.0029**	-	ASTM D 150
Dielectric Constant, 1 MHz	**2.78**	-	ASTM D 150
Surface Resistivity	**>1E15**	Ohm	ASTM D 257
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.2**	%	Sim. to ISO 62
Humidity absorption	**0.05**	%	Sim. to ISO 62
Density	**1110**	kg/m³	ISO 1183
Density	**1110**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**95 - 105**	°C	-
Pre-drying - Time	**2 - 4**	h	-
Melt temperature	**280 - 305**	°C	-
Mold temperature	**65 - 100**	°C	-
Zone 1	**280 - 295**	°C	-
Zone 2	**290 - 300**	°C	-
Zone 3	**295 - 305**	°C	-
Screw speed	**40 - 80**	rpm	-

Characteristics

Processing
Injection Molding, Profile Extrusion, Sheet Extrusion

Special Characteristics
Flame retardant, High impact or impact modified

Additives
Flame retarding agent

Regional Availability
North America