NORYL™ Resin NH7010 - Europe

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

Product Texts

NORYL™ NH7010 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS) and exhibits an excellent balance of non-brominated, non-chlorinated flame retardance, high heat resistance, good flow, and low specific gravity for light weight parts. This injection moldable grade carries UL94 flame ratings of 5VA at 2mm and V0 at 1.5mm along with a UL746C Outdoor Suitability rating of F1. NORYL NH7010 resin is an excellent candidate for applications such as electrical enclosures and solar/PV junction boxes.

UL Yellow Card Link E45329-100245820

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**10**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**5**	kg	-
ASTM Data			
Melt Flow Index, MFI	**10.1**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2500**	MPa	ISO 527
Yield stress	**69**	MPa	ISO 527
Yield strain	**4.9**	%	ISO 527
Stress at break	**63**	MPa	ISO 527
Strain at break	**8.4**	%	ISO 527
Flexural modulus	**2520**	MPa	ISO 178
Charpy notched impact strength, +23°C	**21**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	**20**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**8**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**2250**	MPa	ASTM D 638
Tensile Strength at Yield	**68**	MPa	ASTM D 638
Tensile Strength at Break	**49**	MPa	ASTM D 638
Elongation at Yield	**5.2**	%	ASTM D 638
Elongation at Break	**41**	%	ASTM D 638
Flexural Modulus	**2470**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**223**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**89**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**139**	°C	ISO 75-1/-2
Vicat softening temperature, B	**161**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**162**	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
Burning behav. 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**2.0**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
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Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**825**	°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	**139**	°C	ASTM D 648

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Vicat Temperature	**160**	°C	ASTM D 1525

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.25**	%	Sim. to ISO 62
Humidity absorption	**0.05**	%	Sim. to ISO 62
Density	**1090**	kg/m³	ISO 1183
Density	**1090**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**110 - 120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**300 - 325**	°C	-
Mold temperature	**80 - 110**	°C	-
Zone 1	**265 - 315**	°C	-
Zone 2	**275 - 320**	°C	-
Zone 3	**290 - 325**	°C	-
Screw speed	**20 - 100**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Flame retardant

Additives
Flame retarding agent

Regional Availability
Europe

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