

**Product Texts**

NORYL™ NH6020 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS) designed for high heat resistance and thin-wall FR performance. This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA at 2.5mm and V0 at 0.75mm along with UL746C Outdoor Suitability rating of F1 and RTI of 110C. NORYL NH6020 resin passes VDE/DIN 475 part 815 testing, Ball Pressure Test (BPT) at 125C, GWFI 960C at 1, 2, 3mm, GWIT 825C at 1mm, and CTI >600V making this an excellent candidate for unattended appliance components where EN/IEC 60335 applies.

UL Yellow Card Link [E45329-100158888](https://www.ul.com/yellow-card/E45329-100158888)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	11	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
Density of melt	1050	kg/m <sup>3</sup>	-
Thermal conductivity of melt	0.18	W/(m K)	-
Spec. heat capacity of melt	2010	J/(kg K)	-
Ejection temperature	138	°C	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	13.5	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2740	MPa	ISO 527
Yield stress	77	MPa	ISO 527
Yield strain	4.6	%	ISO 527
Stress at break	56	MPa	ISO 527
Strain at break	4.2	%	ISO 527
Flexural modulus	2680	MPa	ISO 178
Charpy notched impact strength, +23°C	9	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	5	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	2740	MPa	ASTM D 638
Tensile Strength at Yield	78	MPa	ASTM D 638
Tensile Strength at Break	67	MPa	ASTM D 638
Elongation at Yield	4.6	%	ASTM D 638
Elongation at Break	6.1	%	ASTM D 638
Flexural Modulus	3020	MPa	ASTM D 790
Izod Impact notched, 1/8 in	49	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	36	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	124	°C	ISO 75-1/-2
Vicat softening temperature, B	141	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	151	°C	ISO 306
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	2.5	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13

**NORYL™ Resin NH6020 - Americas**

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

GWIT - thickness tested (2)	2	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
<b>ASTM Data</b>			
DTUL @ 264 psi	125	°C	ASTM D 648
Vicat Temperature	150	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Dissipation factor, 1MHz	29	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Comparative tracking index	600	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	0.18	%	Sim. to ISO 62
Humidity absorption	0.06	%	Sim. to ISO 62
Density	1140	kg/m <sup>3</sup>	ISO 1183
Density	1140	kg/m <sup>3</sup>	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	-

**Characteristics****Processing**

Injection Molding

**Special Characteristics**

Flame retardant

**Additives**

Flame retarding agent

**Regional Availability**

North America