

NORYL™ Resin NHP8000VT3

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL NHP8000VT3 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS) designed for high heat resistance, ultra-thin-wall FR and High tracking resistance performance. This extrusion and injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries CTI 600V / PLC 0 and UL94 flame rating of V0 at 0.25mm. NORYL NHP8000VT3 is based on a unique co-polymer technology and exhibits high impact, high heat resistance, dimensional stability, hydrolytic stability, strong electrical performance, low moisture absorption and low specific gravity. This grade is targeted for electrical vehicle (EV) battery pack insulation sheet/film, bus bar insulation layer and other high voltage electric components.

UL Yellow Card [E207780-104546521](https://www.ul.com/yellowcard/E207780-104546521)

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	11.7	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.0073	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.0079	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ASTM Data			
Tensile Modulus	2491	MPa	ASTM D 638
Tensile Strength at Yield	66.8	MPa	ASTM D 638
Elongation at Yield	4.2	%	ASTM D 638
Elongation at Break	10.8	%	ASTM D 638
Flexural Modulus	2600	MPa	ASTM D 790
Flexural Strength	108	MPa	ASTM D 790
Izod Impact notched, 1/8 in	211	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	84	J/m	ASTM D 256
Temperature	-40	°C	-
Izod Impact unnotched, 1/8 in	N	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.2	mm	-
Yellow Card available	yes	-	-
ASTM Data			
DTUL @ 66 psi	150	°C	ASTM D 648
DTUL @ 264 psi	133	°C	ASTM D 648
Vicat Temperature	155	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Comparative tracking index	600	-	IEC 60112
ASTM Data			
Surface Resistivity	7.5E16	Ohm	ASTM D 257
Volume Resistivity	6.2E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Density	1100	kg/m ³	ISO 1183

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 120	°C	-
Pre-drying - Time	3 - 5	h	-
Melt temperature	280 - 330	°C	-
Mold temperature	70 - 120	°C	-

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Zone 1	280 - 330	°C	-
Zone 2	280 - 330	°C	-
Zone 3	280 - 330	°C	-
Nozzle temperature	250 - 330	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	3 - 8	MPa	-

Characteristics**Processing**

Injection Molding, Other Extrusion, Thermoforming

Special Characteristics

Flame retardant, Halogen-free, High impact or impact modified, Heat stabilized or stable to heat

Features

Low Warpage

Chemical Resistance

Hydrolytically Stable

Applications

Automotive, Electrical and Electronical

Regional Availability

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