

Product Texts

NORYL™ N190X resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA at 3mm and V0 at 1.5mm along with a UL746C Outdoor Suitability rating of F1. NORYL N190X resin offers strong electrical performance, low moisture absorption, dimensional stability, and hydrolytical stability. This material is an excellent candidate for indoor and outdoor electrical enclosure, wall plate / switch, connector, and solar / photovoltaic junction box applications.

UL Yellow Card Link [E45587-100110159](https://www.ul.com/yellow-card/E45587-100110159)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	23	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	19.3	g/10min	ASTM D 1238
Temperature	250	°C	-
Load	10	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2600	MPa	ISO 527
Yield stress	58	MPa	ISO 527
Yield strain	3.2	%	ISO 527
Stress at break	50	MPa	ISO 527
Strain at break	9.2	%	ISO 527
Flexural modulus	2350	MPa	ISO 178
Izod notched impact strength, +23°C, 4mm	20	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2580	MPa	ASTM D 638
Tensile Strength at Yield	60	MPa	ASTM D 638
Tensile Strength at Break	47	MPa	ASTM D 638
Elongation at Yield	3.6	%	ASTM D 638
Elongation at Break	9	%	ASTM D 638
Flexural Modulus	2500	MPa	ASTM D 790
Rockwell Hardness	R 120	-	ASTM D 785
Taber Abrasion Resistance	76	mg/1000 cycles	ASTM D 1044
Izod Impact notched, 1/8 in	293	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	720	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	82	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	95	°C	ISO 75-1/-2
Vicat softening temperature, 120°C/h 50N	107	°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. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	1.0	mm	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	3.0	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
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Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	800	°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)	775	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

NORYL™ Resin N190X - Asia

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

ASTM Data

DTUL @ 66 psi	95	°C	ASTM D 648
DTUL @ 264 psi	78	°C	ASTM D 648
Vicat Temperature	104	°C	ASTM D 1525
Thermal Conductivity, solid state	0.0346	W/(m K)	ASTM C 177

Electrical properties

	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	19.2	kV/mm	ASTM D 149
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Other properties

	Value	Unit	Test Standard
Density	1130	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding

	Value	Unit	Test Standard
Pre-drying - Temperature	75 - 80	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	250 - 275	°C	-
Mold temperature	55 - 75	°C	-
Zone 1	215 - 265	°C	-
Zone 2	225 - 270	°C	-
Zone 3	240 - 275	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics**Processing**

Injection Molding

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Applications

Automotive

Regional Availability

Asia Pacific