

Product Texts

NORYL™ N300X 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 2mm and V0 at 1.5mm. NORYL N300X 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 and solar / photovoltaic junction box applications.

UL Yellow Card Link [E207780-100429717](https://www.ul.com/yellow-card/E207780-100429717)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	7	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	7.4	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2220	MPa	ISO 527
Yield stress	75	MPa	ISO 527
Yield strain	5.2	%	ISO 527
Stress at break	66	MPa	ISO 527
Strain at break	13	%	ISO 527
Flexural modulus	2520	MPa	ISO 178
Flexural strength	112	MPa	ISO 178
Izod notched impact strength, +23°C, 4mm	15	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2380	MPa	ASTM D 638
Tensile Strength at Yield	74	MPa	ASTM D 638
Tensile Strength at Break	73	MPa	ASTM D 638
Elongation at Yield	5.3	%	ASTM D 638
Elongation at Break	7.6	%	ASTM D 638
Flexural Modulus	2650	MPa	ASTM D 790
Rockwell Hardness	R 119	-	ASTM D 785
Izod Impact notched, 1/8 in	190	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	55	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	162	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	164	°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
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)	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 @ 66 psi	155	°C	ASTM D 648
DTUL @ 264 psi	140	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	19.4	kV/mm	ASTM D 149
Dissipation Factor, 60 Hz	0.0031	-	ASTM D 150
Dissipation Factor, 1 MHz	0.009	-	ASTM D 150
Dielectric Constant, 60 Hz	2.68	-	ASTM D 150
Dielectric Constant, 1 MHz	2.63	-	ASTM D 150
Surface Resistivity	>1E15	Ohm	ASTM D 257
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

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

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Regional Availability

Asia Pacific