

**NORYL® HS1000X***Americas: COMMERCIAL*

PPE+PS blend. 13% Mineral reinforced. Non-brominated, non-chlorinated FR system. UL94 V0 and 5VA listing. UL 746C f1. Radiant Panel listing. Dielectric strength. Dimensional stability. Suitable for E/E applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	66	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	51	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	7.6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	30	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	103	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2900	MPa	ASTM D 790
Hardness, Rockwell R	121	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	1511	J/m	ASTM D 4812
Izod Impact, notched, 23°C	134	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	25	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	126	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	98	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	93	°C	ASTM D 648
Relative Temp Index, Elec	100	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	100	°C	UL 746B
PHYSICAL			
Specific Gravity	1.23	-	ASTM D 792
Water Absorption, 24 hours	0.07	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	GE Method
ELECTRICAL			
Volume Resistivity	1.6E+16	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+16	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	17.8	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.03	-	ASTM D 150
Relative Permittivity, 1 MHz	2.83	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.027	-	ASTM D 150
Dissipation Factor, 1 MHz	0.007	-	ASTM D 150



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1	mm	UL 94
UL Recognized, 94-5VA Rating (3)	2.5	mm	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED
Radiant Panel Listing	YES	-	UL Tested
UV-light, water exposure/immersion	F1	-	UL 746C



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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	90 - 95	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	255 - 280	°C
Nozzle Temperature	255 - 280	°C
Front - Zone 3 Temperature	245 - 280	°C
Middle - Zone 2 Temperature	230 - 275	°C
Rear - Zone 1 Temperature	220 - 270	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%
Vent Depth	0.038 - 0.051	mm