NORYL™ RESIN EN185

REGION AMERICAS

DESCRIPTION

NORYL™ EN185 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This extrusion grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of v0 at 3mm and V1 at 1.5mm. NORYL EN185 resin exhibits excellent impact strength, very low moisture absorption, good dimensional stability, and great machinability. NORYL EN185 resin is an excellent candidate for a variety of applications including fiber optic ducting,

TYPICAL PROPERTY VALUES

Revision 20190717

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	42	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	67	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2270	MPa	ASTM D 790
Hardness, Rockwell R	113	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	389	J/m	ASTM D 256
Izod Impact, notched, -40°C	160	J/m	ASTM D 256
Gardner, -30°C	24	J	ASTM D 3029
Gardner, -40°C	13	J	ASTM D 3029
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	93	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.38E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Water Absorption, 24 hours	0.07	%	ASTM D 570
ELECTRICAL			
Dielectric Strength, in oil, 3.2 mm	24.8	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	2.8	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.004	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Dissipation Factor, 1 MHz	0.0035	-	IEC 60250
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥6	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-221153	-	-
UL Recognized, 94V-0 Flame Class Rating	≥3	mm	UL 94

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94V-1 Flame Class Rating	≥1.5	mm	UL 94
Radiant Panel Listing	☑	-	UL Tested
EXTRUSION			
Drying Temperature	90 – 100	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	–	%	
Melt Temperature	195 – 210	°C	
Barrel - Zone 1 Temperature	170	°C	
Barrel - Zone 2 Temperature	170	°C	
Barrel - Zone 3 Temperature	190	°C	
Barrel - Zone 4 Temperature	190	°C	
Adapter Temperature	205	°C	
Die Temperature	205	°C	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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