

NORYL™ RESIN EN185

REGION AMERICAS

DESCRIPTION

NORYL EN185 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). 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.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Dimensional stability, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Extrusion

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	42	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	67	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2270	MPa	ASTM D790
Hardness, Rockwell R	113	-	ASTM D785
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	389	J/m	ASTM D256
Izod Impact, notched, -40°C	160	J/m	ASTM D256
Gardner, -30°C	24	J	ASTM D3029
Gardner, -40°C	13	J	ASTM D3029
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 6.4 mm, unannealed	93	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D648
CTE, -40°C to 95°C, flow	7.38E-05	1/°C	ASTM E831
PHYSICAL ⁽¹⁾			
Specific Gravity	1.08	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.07	%	ASTM D570
ELECTRICAL ⁽¹⁾			
Dielectric Strength, in oil, 3.2 mm	24.8	kV/mm	ASTM D149

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 50/60 Hz	2.8	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.004	-	ASTM D150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
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 ⁽²⁾			
UL Yellow Card Link	E121562-221153	-	-
UL Recognized, 94V-0 Flame Class Rating	≥3	mm	UL 94
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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

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

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