

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

Electrical and Electronics

Industrial

SUB INDUSTRY

Electronic Components, Mobile Phone - Computer - Tablets

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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.