NORYL™ RESIN EN265

REGION AMERICAS

DESCRIPTION

NORYL EN265 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This high heat extrusion grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of v0 at 6mm and V1 at 1.5mm along with UL746C outdoor weatherability rating of F1. NORYL EN265 resin exhibits excellent impact strength, very low moisture absorption, good dimensional stability, and great machinability. NORYL EN265 resin is an excellent candidate for a variety of indoor and outdoor electrical applications including trunking and conduit.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, 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	63	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	25	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	99	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2550	MPa	ASTM D790
Hardness, Rockwell R	119	-	ASTM D785
IMPACT [1]			
Izod Impact, notched, 23°C	186	J/m	ASTM D256
Izod Impact, notched, -40°C	133	J/m	ASTM D256
Gardner, -30°C	14	J	ASTM D3029
Gardner, -40°C	4	J	ASTM D3029
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	123	°C	ASTM D648
CTE, -40°C to 95°C, flow	5.94E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	110	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	110	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.08	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.07	%	ASTM D570

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm [3]	0.5 – 0.7	%	SABIC method
ELECTRICAL [1]			
Dielectric Strength, in oil, 3.2 mm	19.6	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	2.69	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.0007	-	ASTM D150
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-221239	-	-
Oxygen Index (LOI)	29.2	%	ASTM D2863
Radiant Panel Listing	RP100	-	UL Tested
UV-light, water exposure/immersion	F1	-	UL 746C
Glow Wire Flammability Index, 1.0 mm	900	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	900	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	700	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	700	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	725	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	725	°C	IEC 60695-2-13
UL Recognized, 94V-0 Flame Class Rating	≥6	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥1.5	mm	UL 94
EXTRUSION			
Drying Temperature	105 – 115	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Melt Temperature	225 – 255	°C	
Barrel - Zone 1 Temperature	205	°C	
Barrel - Zone 2 Temperature	205	°C	
Barrel - Zone 3 Temperature	225	°C	
Barrel - Zone 4 Temperature	225	°C	
Adapter Temperature	250	°C	
Die Temperature	250	°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.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

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 NONINFRINGEMENT 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.