NORYL™ RESIN ENG265F

REGION AMERICAS

DESCRIPTION

NORYL™ ENG265F resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This material is suitable for profile extrusion and exhibits very good hydrolytic stability, low moisture absorption, good dimensional stability. NORYL ENG265F resin certifies to NSF 61 and is an excellent candidate for water management applications such as extruded tubes for reverse osmosis systems.

TYPICAL PROPERTY VALUES

Revision 20190215

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, break	50	MPa	ASTM D 638
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D 638
Tensile Strain, yield	3.3	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	28	%	ASTM D 638
Tensile Modulus, 5 mm/min	2400	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	89	MPa	ASTM D 790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	88	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2550	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2450	MPa	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785
Tensile Stress, yield	55	MPa	ISO 527
Tensile Stress, break	50	MPa	ISO 527
Tensile Strain, yield	3.1	%	ISO 527
Tensile Strain, break	27	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress	95	MPa	ISO 178
Flexural Modulus	2500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	186	J/m	ASTM D 256
Izod Impact, notched, -30°C	114	J/m	ASTM D 256
Gardner, -30°C	25	J	ASTM D 3029
Gardner, -40°C	5	J	ASTM D 3029
Instrumented Impact Total Energy, 23°C	39	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Charpy Impact, notched, 23°C	13	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	10	kJ/m²	ISO 179/2C
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	132	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	118	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D 648
CTE, -40°C to 95°C, flow	5.94E-05	1/°C	ASTM E 831

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Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
Relative Temp Index, Elec [1]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	90	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.06	-	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 280°C/5.0 kgf	8.5	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 280°C/5.0 kg	8	cm³/10 min	ISO 1133
ELECTRICAL			
Dielectric Strength, in oil, 3.2 mm	19.7	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	2.65	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0004	-	ASTM D 150
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥6	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 4	≥6	mm	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-221150	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
EXTRUSION			
Drying Temperature	105 – 115	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	–	%	
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) 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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