

NORYL™ ENG265 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS blend. Unfilled. Suitable for profile extrusion. NSF listed for potable water use in several colors (Standard 61). Low water absorption. Hydrolytic stability. Dimensional stability. Typical applications include tubes for reverse osmosis systems.

General Information			
UL YellowCard	E121562-221150		
Features	Good dimensional stability		
	Hydrolysis stability		
	Low or no water absorption		
Uses	Pipe fittings		
Agency Ratings	NSF 61		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	8.5	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	8.70	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption (24 hr)	0.060	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	119		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2400	MPa	ASTM D638
--	2550	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	56.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2
Fracture	50.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation			
Yield	3.3	%	ASTM D638
Yield	3.1	%	ISO 527-2
Fracture ³	28	%	ASTM D638
Fracture	27	%	ISO 527-2
Flexural Modulus			
50.0mm span ⁴	2550	MPa	ASTM D790
100mm span ⁵	2450	MPa	ASTM D790

--	2500	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178
Yield, 50.0mm span ⁶	89.0	MPa	ASTM D790
Yield, 100mm span ⁷	88.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/2C
-30°C	10	kJ/m ²	ISO 179/2C
23°C	13	kJ/m ²	ISO 179/2C
Notched Izod Impact			
-30°C	110	J/m	ASTM D256
23°C	190	J/m	ASTM D256
-30°C ⁸	8.7	kJ/m ²	ISO 180/1A
23°C ⁹	13	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	39.0	J	ASTM D3763
Dart Drop Impact			ASTM D3029
-40°C	5.42	J	ASTM D3029
-30°C	25.8	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	132	°C	ASTM D648
0.45 MPa, unannealed, 6.40mm	137	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	118	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	126	°C	ASTM D648
Vicat Softening Temperature			
--	137	°C	ISO 306/B50
--	141	°C	ISO 306/B120
CLTE - Flow (-40 to 95°C)	5.9E-5	cm/cm/°C	ASTM E831
RTI Elec	105	°C	UL 746
RTI Imp	90.0	°C	UL 746
RTI	105	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.20 mm, in Oil)	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	2.65		ASTM D150
60 Hz	2.65		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	4.0E-4		ASTM D150
60 Hz	4.0E-4		ASTM D150
Arc Resistance ¹⁰	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746

High Amp Arc Ignition (HAI)	PLC 0	UL 746	
High Voltage Arc Tracking Rate (HVTR)	PLC 4	UL 746	
Hot-wire Ignition (HWI)	PLC 2	UL 746	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	HB		UL 94
Extrusion	Nominal Value	Unit	
Drying Temperature	104 - 116	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Cylinder Zone 1 Temp.	204	°C	
Cylinder Zone 2 Temp.	204	°C	
Cylinder Zone 3 Temp.	227	°C	
Cylinder Zone 4 Temp.	227	°C	
Adapter Temperature	249	°C	
Melt Temperature	227 - 254	°C	
Die Temperature	249	°C	
Extrusion instructions			
Drying Time (Cumulative): 8 hrs			
NOTE			
1.	5.0 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	1.3 mm/min		
5.	2.6 mm/min		
6.	1.3 mm/min		
7.	2.6 mm/min		
8.	80*10*4		
9.	80*10*4		
10.	Tungsten electrode		

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