

NORYL™ PKN4775F resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS blend. Opaque. FDA compliant in limited colors. High heat. Modulus at elevated temperature. Good ESCR performance. Thin wall extrusion and injection molding. Typical applications include packaging for high performance applications.

General Information			
Features	High ESCR (Stress Cracking Resistance)		
	Heat resistance, high		
Uses	Packaging		
Agency Ratings	FDA not rated		
Appearance	Opacity		
Processing Method	Sheet extrusion molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	15	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	14.6	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.25	%	ISO 62
Equilibrium, 23°C, 50% RH	0.050	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2120	MPa	ASTM D638
--	2120	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	51.5	MPa	ASTM D638
Yield	51.3	MPa	ISO 527-2/50
Fracture ³	47.5	MPa	ASTM D638
Fracture	47.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.1	%	ASTM D638
Yield	4.2	%	ISO 527-2/50
Fracture ⁵	35	%	ASTM D638
Fracture	29	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2210	MPa	ASTM D790
-- ⁷	2160	MPa	ISO 178

Flexural Stress			
--	82.7	MPa	ISO 178
Yield, 50.0mm span ⁸	78.8	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	20	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	160	J/m	ASTM D256
23°C	270	J/m	ASTM D256
-30°C ¹⁰	11	kJ/m ²	ISO 180/1A
23°C ¹¹	20	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	39.7	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	138	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	122	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	122	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	142	°C	ASTM D1525, ISO 306/B50 10 ¹³
--	144	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	9.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	9.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Extrusion	Nominal Value	Unit	
Drying Temperature	71.1 - 82.2	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	2.0E-4	%	
Cylinder Zone 1 Temp.	204 - 227	°C	
Cylinder Zone 2 Temp.	216 - 238	°C	
Cylinder Zone 3 Temp.	238 - 266	°C	
Cylinder Zone 4 Temp.	238 - 266	°C	
Adapter Temperature	238 - 266	°C	
Melt Temperature	266 - 277	°C	
Die Temperature	238 - 266	°C	
Extrusion instructions			
Drying Time (Cumulative): 8 hrsRoll Stack Temp - Bottom: 104 - 121 °CRoll Stack Temp - Middle: 104 - 121 °CRoll Stack Temp - Top: 104 - 121 °C			
NOTE			
1.	5.0 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		

6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	标准 B (120°C/h), 载荷2 (50N)

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