

NORYL™ EXNL0143 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

NORYL PX1736 Resin is a blend of PPE and PS, that provides high strength, increased heat resistance, and translucency. The material has melt strenght suitable for Extrusion and Blow Molding applications. Typical applications include High Performance Applications.

General Information			
Features	High strength		
	Heat resistance, high		
Processing Method	Sheet extrusion molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	26.1	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	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	2780	MPa	ASTM D638
--	3120	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	79.6	MPa	ASTM D638
Yield	79.1	MPa	ISO 527-2/50
Fracture ³	56.0	MPa	ASTM D638
Fracture	72.4	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	29	%	ASTM D638
Yield	4.7	%	ISO 527-2/50
Fracture ⁵	5.2	%	ASTM D638
Fracture	7.6	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2940	MPa	ASTM D790
-- ⁷	2980	MPa	ISO 178
Flexural Stress			
--	124	MPa	ISO 178
Yield, 50.0mm span ⁸	125	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	3.7	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	28	J/m	ASTM D256
23°C	35	J/m	ASTM D256
-30°C ¹⁰	4.0	kJ/m ²	ISO 180/1A
23°C ¹¹	4.1	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	9.24	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	123	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	123	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	141	°C	ASTM D1525, ISO 306/B50 ¹³
--	143	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	7.9E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	8.0E-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 °C Roll Stack Temp - Middle: 104 - 121 °C Roll 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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