

NORYL™ 731F resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS, HDT 125

General Information			
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.80	%	Internal method
Water Absorption			ISO 62
23°C, 24 hr ¹	0.040	%	ISO 62
23°C, 24 hr	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2400	MPa	ASTM D638
--	2100	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	54.0	MPa	ASTM D638
Yield	40.0	MPa	ISO 527-2/50
Fracture ⁴	45.0	MPa	ASTM D638
Fracture	40.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	4.0	%	ASTM D638
Yield	70	%	ISO 527-2/50
Fracture ⁶	30	%	ASTM D638
Fracture	70	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁷	2100	MPa	ASTM D790
-- ⁸	2300	MPa	ISO 178
Flexural Stress			
--	80.0	MPa	ISO 178
Yield, 50.0mm span ⁹	75.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (23°C)	13	kJ/m ²	ISO 179/1eA
Notched Izod Impact			

-30°C	120	J/m	ASTM D256
23°C	150	J/m	ASTM D256
-30°C ¹¹	11	kJ/m ²	ISO 180/1A
23°C ¹²	16	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	800	J/m	ASTM D4812
-30°C ¹³	55	kJ/m ²	ISO 180/1U
23°C ¹⁴	60	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	55.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	110	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	124	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁵	112	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	133	°C	ASTM D1525, ISO 306/B50 ¹¹ ¹⁶
--	135	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	7.3E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	8.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	8.3E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	104 - 110	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 - 70	%	
Rear Temperature	249 - 299	°C	
Middle Temperature	260 - 304	°C	
Front Temperature	271 - 310	°C	
Nozzle Temperature	282 - 310	°C	
Processing (Melt) Temp	282 - 310	°C	
Mold Temperature	76.7 - 104	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	20 - 100	rpm	
NOTE			
1.	50% RH		
2.	5.0 mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		

5.	Type 1, 50mm/min
6.	Type 1, 50mm/min
7.	1.3 mm/min
8.	2.0 mm/min
9.	1.3 mm/min
10.	80*10*4 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4
14.	80*10*4
15.	80*10*4 mm
16.	标准 B (120°C/h), 载荷2 (50N)

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