

NORYL™ FXN4020H resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

high gloss NORYL

General Information			
UL YellowCard	E45329-100152338		
Features	Highlight		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/2.16 kg)	25.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.060	%	ISO 62
Equilibrium, 23°C, 50% RH	9.0E-3	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2560	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	67.0	MPa	ASTM D638
Yield	58.0	MPa	ISO 527-2/50
Fracture ³	55.0	MPa	ASTM D638
Fracture	46.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	3.6	%	ASTM D638
Yield	3.3	%	ISO 527-2/50
Fracture ⁵	5.2	%	ASTM D638
Fracture	4.4	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2730	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	85.0	MPa	ISO 178
Yield, 50.0mm span ⁸	100	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	10	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	20	J/m	ASTM D256
23°C	85	J/m	ASTM D256
-30°C ¹⁰	4.6	kJ/m ²	ISO 180/1A
23°C ¹¹	8.0	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	30.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	75.0	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	83.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	75.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	96.0	°C	ASTM D1525, ISO 306/B50 ¹³
--	98.0	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	7.7E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.9E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flammability	Nominal Value	Test Method	
Flame Rating			UL 94
1.50 mm, Testing by SABIC	V-1		UL 94
2.50 mm, Testing by SABIC	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	76.7 - 82.2	°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	216 - 266	°C	
Middle Temperature	227 - 271	°C	
Front Temperature	238 - 277	°C	
Nozzle Temperature	249 - 277	°C	
Processing (Melt) Temp	249 - 277	°C	
Mold Temperature	54.4 - 76.7	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	20 - 100	rpm	
Vent Depth	0.038 - 0.051	mm	
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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