

EXTEM™ XH1015 resin

Thermoplastic Polyimide

SABIC Innovative Plastics

Message:

Thermoplastic Polyimide Extem* XH1015 Resin.

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (367°C/6.6 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	0.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	1.0 to 1.2	%	Internal Method
Water Absorption			
23°C, 24 hr ¹	0.60	%	ASTM D570
Saturation, 23°C	2.3	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	3420	MPa	ASTM D638
--	3100	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	103	MPa	ASTM D638
Yield	101	MPa	ISO 527-2/5
Break ⁴	96.0	MPa	ASTM D638
Break	74.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁵	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/5
Break ⁶	10	%	ASTM D638
Break	7.0	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁷	3130	MPa	ASTM D790
-- ⁸	2870	MPa	ISO 178
Flexural Stress			
--	120	MPa	ISO 178
Yield, 50.0 mm Span ⁹	168	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	43	J/m	ASTM D256

23°C ¹⁰	4.2	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	250	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	235	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	237	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	224	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	260	°C	ASTM D1525 ¹²
--	250	°C	ISO 306/B50
--	248	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 150°C	5.0E-5	cm/cm/°C	
Transverse : 23 to 150°C	5.1E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	175	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 70	%	
Rear Temperature	360 to 385	°C	
Middle Temperature	370 to 400	°C	
Front Temperature	380 to 410	°C	
Nozzle Temperature	375 to 405	°C	
Processing (Melt) Temp	380 to 410	°C	
Mold Temperature	150 to 175	°C	
Back Pressure	0.300 to 0.700	MPa	
Screw Speed	70 to 100	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	Results measured at 48 hrs		
2.	5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	Type I, 5.0 mm/min		
7.	1.3 mm/min		
8.	2.0 mm/min		
9.	1.3 mm/min		
10.	80*10*4		
11.	80*10*4 mm		
12.	Rate B (120°C/h), Loading 2 (50 N)		

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