

VALOX™ EH7020HF resin

Polybutylene Terephthalate + PET

SABIC Innovative Plastics Asia Pacific

Message:

VALOX EH7020HF is a mineral filled PBT/PET that offers good surface appearance, high flow and good heat performance. EH7020HF was developed for automotive bezel application that require basecoat + top coat metalization. EH7020HF is higher flow version of EH7020.

General Information			
Filler / Reinforcement	Mineral		
Features	Good Surface Finish		
	High Flow		
	High Heat Resistance		
Uses	Automotive Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.49	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
265°C/2.16 kg	64	g/10 min	
266°C/1.2 kg	36	g/10 min	
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	52.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	1.5 to 1.6	%	
Flow : 3.20 mm	1.0 to 1.1	%	
Across Flow : 3.20 mm	1.1 to 1.2	%	
Water Absorption			ISO 62
Saturation, 23°C	0.43	%	
Equilibrium, 23°C, 50% RH	0.42	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	5880	MPa	ASTM D638
--	4800	MPa	ISO 527-2/1
Tensile Strength			
Yield	56.0	MPa	Internal Method
Yield ³	55.0	MPa	ASTM D638
Yield	45.0	MPa	ISO 527-2/5
Break ⁴	55.0	MPa	ASTM D638
Break	57.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁵	2.0	%	ASTM D638

Yield	1.5	%	ISO 527-2/5
Break	8.0	%	Internal Method
Break ⁶	2.0	%	ASTM D638
Break	1.9	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁷	4680	MPa	ASTM D790
6.40 mm	4860	MPa	ASTM D790
-- ⁸	4710	MPa	ISO 178
Flexural Stress			
--	96.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	93.0	MPa	ASTM D790
Yield, 6.40 mm	96.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (23°C)	2.5	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	31	J/m	ASTM D256
23°C	31	J/m	ASTM D256
-30°C ¹¹	2.5	kJ/m ²	ISO 180/1A
23°C ¹²	2.7	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	4.26	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 6.40 mm	200	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	70.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹³	77.0	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	89.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	180	°C	ASTM D1525, ISO 306/B50 ¹⁵
--	179	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	5.3E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.2E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	238 to 254	°C	
Middle Temperature	243 to 260	°C	

Front Temperature	249 to 266	°C
Nozzle Temperature	243 to 260	°C
Processing (Melt) Temp	249 to 266	°C
Mold Temperature	65.6 to 87.8	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 80	rpm
Vent Depth	0.025 to 0.038	mm

NOTE

1.	Tensile Bar
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 sp=62mm
11.	80*10*4
12.	80*10*4
13.	120*10*4 mm
14.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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