NORYL™ FP5140HF resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

NORYLFP5140HF is an unfilled, injection moldable modified polyphenylene ether resin with an ISO306 Vicat B/120 of 100 deg C. Designed for good dimensional stability and high flow, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating at 1.5mm with a specific density of 1.11g/cm3. NORYL FP5140 may be an excellent material for Flat Panel TV enclosure applications requiring good rheological properties, heat resistance, hydrolysis resistance, low density and thin wall flame resistance

General Information	
Additive	Flame Retardant
Features	Bromine Free
	Chlorine Free
	Flame Retardant
	Good Dimensional Stability
	High Flow
	Hydrolysis Resistant
	Low Density
	Medium Heat Resistance
Processing Method	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
280°C/1.2 kg	17.0	cm³/10min	
280°C/2.16 kg	48.0	cm³/10min	
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.18	%	
Equilibrium, 23°C, 50% RH	0.050	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- [1]	2950	MPa	ASTM D638
--	2530	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	48.0	MPa	
Break	44.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	2.7	%	
Break	21	%	
Flexural Modulus [2]	2460	MPa	ISO 178

Flexural Stress	80.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [3] (23°C)	7.0	kJ/m²	ISO 179/1eA
Notched Izod Impact Strength [4]			ISO 180/1A
-30°C	5.0	kJ/m²	
23°C	6.4	kJ/m²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	78.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span [5]	80.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	97.0	°C	ASTM D1525, ISO 306/B50 8 [6]
--	100	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	8.3E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.7E-5	cm/cm/°C	
RTI Elec	65.0	°C	UL 746
RTI Imp	65.0	°C	UL 746
RTI Str	65.0	°C	UL 746
Flammability	**Nominal Value**		**Test Method**
Flame Rating (1.50 mm, Testing by SABIC)	V-1		UL 94
Injection	**Nominal Value**	**Unit**	
Drying Temperature	70.0 to 80.0	°C	
Drying Time	2.0 to 3.0	hr	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	200 to 220	°C	
Middle Temperature	230 to 260	°C	
Front Temperature	250 to 285	°C	
Nozzle Temperature	240 to 270	°C	
Processing (Melt) Temp	250 to 285	°C	
Mold Temperature	40.0 to 65.0	°C	

NOTE	
1.	50 mm/min
2.	2.0 mm/min
3.	80*10*4 sp=62mm
4.	80*10*4
5.	80*10*4 mm
6.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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