

NORYL™ NH7010HF resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

Noryl* NH7010HF resin is a modified PPE-PS blend that exhibits an excellent balance of non-halogenated flame retardance, high heat resistance, good flow, and low specific gravity for light weight parts. The resin will be available in custom colors and is suitable for injection molding.

General Information			
Features	Flame Retardant		
	Good Flow		
	Halogen Free		
	High Heat Resistance		
	Low Specific Gravity		
Appearance	Colors Available		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.09	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	20	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	20.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.25	%	
Equilibrium, 23°C, 50% RH	0.050	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2180	MPa	ASTM D638
Tensile Strength ² (Break)	59.0	MPa	ASTM D638
Tensile Elongation ³			ASTM D638
Yield	5.0	%	
Break	12	%	
Flexural Modulus ⁴ (50.0 mm Span)	2460	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	69	J/m	
23°C	230	J/m	
Instrumented Dart Impact (23°C, Total Energy)	53.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			

1.8 MPa, Unannealed, 3.20 mm	138	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ⁶	139	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	159	°C	ASTM D1525 ⁷
--	162	°C	ISO 306/B120
Ball Pressure Test ⁸ (145°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	8.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.0E-5	cm/cm/°C	
RTI Elec	105	°C	UL 746
RTI Imp	105	°C	UL 746
RTI Str	105	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Arc Resistance ⁹	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm, Testing by SABIC	V-0		
2.00 mm, Testing by SABIC	5VA		
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	825	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	110 to 121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 70	%	
Rear Temperature	266 to 316	°C	
Middle Temperature	277 to 321	°C	
Front Temperature	288 to 327	°C	
Nozzle Temperature	299 to 327	°C	
Processing (Melt) Temp	299 to 327	°C	
Mold Temperature	82.2 to 110	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	20 to 100	rpm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	1.3 mm/min		

5.	1.3 mm/min
6.	80*10*4 mm
7.	Rate B (120°C/h), Loading 2 (50 N)
8.	Approximate maximum
9.	Tungsten Electrode

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