

NORYL™ FNH2160 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

Non brominated non chlorinated flame retarded NORYL resin for structural foam applications. 80C HDT. All values at 20% weight reduction.

General Information			
UL YellowCard	E121562-101920328		
Additive	Flame retardancy		
Features	Chlorine Free		
	Foamable property		
	Bromine-free		
	Flame retardancy		
Uses	Structural Foam		
Processing Method	Foam treatment		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
-- ¹	0.878	g/cm ³	ASTM D792
--	1.12	g/cm ³	ASTM D792
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	36.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (6.40 mm)	0.50 - 0.80	%	Internal method
Water Absorption (24 hr)	0.070	%	ASTM D570
Foam - Physical ²	20	%	Internal method
Foam - Mechanical ³	20	%	Internal method
Foam - Impact ⁴	20	%	Internal method
Foam - Thermal ⁵	20	%	Internal method
Foam - Flame Class Minimum Density	850	kg/m ³	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 6.35mm	36.0	MPa	ASTM D638
Fracture, 6.35mm	34.0	MPa	ASTM D638
Tensile Elongation (Break, 6.35 mm)	12	%	ASTM D638
Flexural Modulus (6.40 mm)	2250	MPa	ASTM D790
Flexural Strength (Yield, 6.40 mm)	70.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (23°C, 6.40 mm)	360	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Energy at Peak Load)	29.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	93.0	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	82.0	°C	ASTM D648
RTI Elec	65.0	°C	UL 746
RTI Imp	65.0	°C	UL 746
RTI	65.0	°C	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
3.00 mm	V-1		UL 94
6.00 mm	V-0		UL 94
3.90 mm	5VA		UL 94
Additional Information			
Structural Foam Molding - Blowing Agent, Physical System: Nitrogen Gas Structural Foam Molding - Concentration Range (Blowing Agent): 1 - 3 % Structural Foam Molding - Drying Temperature (Resin): 71 - 82 °C Structural Foam Molding - Drying Time (Resin): 2 - 4 hrs Structural Foam Molding - Drying Time (Resin, Cumulative): 8 hrs Structural Foam Molding - Front Temperature: 271 - 304 °C Structural Foam Molding - Melt Temperature: 271 - 310 °C Structural Foam Molding - Middle Temperature: 271 - 304 °C Structural Foam Molding - Mold Temperature: 27 - 54 °C Structural Foam Molding - Nozzle Temperature: 271 - 304 °C Structural Foam Molding - Rear Temperature: 232 - 260 °C Structural Foam Molding - Recommended Concentration (Blowing Agent): 2 %			
NOTE			
1.	Foam molded		
2.	6.4 mm wt reduction		
3.	6.4 mm wt reduction		
4.	6.4 mm wt reduction		
5.	6.4 mm wt reduction		

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