NORYL™ RESIN FN150X

REGION ASIA

DESCRIPTION

NORYL™ FN150X resin is a foamable blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS) and offers 20% weight reduction at 6.35mm (0.250") wall. This material contains non-brominated, non-chlorinated flame retardant with a UL94 flame rating of 5VA and V0 at 4mm and has thin-wall capability. NORYL FN150X resin exhibits good dimensional stability, low moisture absorption, and improved reliability + productivity. The unique combination of properties allow for designing optimum wall thickness in computer and business machine applications, electrical enclosures/housings, medical equipment, and hospital bed rails and components.

TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
FOAM - MECHANICAL 6.4 mm Wt Reduction	20	%	-
Tensile Stress, yield, 6.35 mm	28	MPa	ASTM D 638
Tensile Stress, break, 6.35 mm	28	MPa	ASTM D 638
Tensile Strain, yield, 6.35 mm	7.3	%	ASTM D 638
Tensile Strain, break, 6.35 mm	14	%	ASTM D 638
Flexural Stress, yield, 6.4 mm	52	MPa	ASTM D 790
Flexural Modulus, 6.4 mm	1740	MPa	ASTM D 790
Hardness, Rockwell R	121	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	152	mg/1000cy	ASTM D 1044
IMPACT			
FOAM - IMPACT 6.4 mm Wt Reduction	20	%	-
Izod Impact, unnotched, 23°C, 6.4mm	341	J/m	ASTM D 4812
THERMAL			
FOAM - THERMAL 6.4mm Wt Reduction	20	%	-
Vicat Softening Temp, Rate B/50	110	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	89	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	73	°C	ASTM D 648
PHYSICAL			
FOAM - PHYSICAL 6.4mm Wt Reduction	20	%	-
Specific Gravity	1.12	-	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm	0.6 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 6.4 mm	0.6 – 0.8	%	SABIC method
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E121562-221158	-	-
Radiant Panel Listing	☑	-	UL Tested
UL Recognized, 94-5VA Flame Class Rating	≥4	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥4	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥3	mm	UL 94
FOAM - Flame Class Minimum Density	0.9	g/cm³	-
STRUCTURAL FOAM MOLDING			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Blowing Agent, Physical System	Nitrogen Gas	-	
Concentration Range (Blowing Agent)	1 – 3	%	
Recommended Concentration (Blowing Agent)	2	%	
Drying Temperature (Resin)	70 – 80	°C	
Drying Time (Resin)	2 – 4	hrs	
Drying Time (Resin, Cumulative)	8	hrs	
Melt Temperature	270 – 310	°C	
Nozzle Temperature	270 – 305	°C	
Front Temperature	270 – 305	°C	
Middle Temperature	270 – 305	°C	
Rear Temperature	230 – 260	°C	
Mold Temperature	25 – 55	°C	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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