

NORYL™ RESIN FN170X

REGION AMERICAS

DESCRIPTION

Foamable resin. All properties at 10% density reduction; 0.250" thick test specimens.

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
FOAM - MECHANICAL 6.4 mm Wt Reduction	10	%	-
Tensile Stress, yield, 6.35 mm	29	MPa	ASTM D 638
Tensile Stress, break, 6.35 mm	28	MPa	ASTM D 638
Tensile Strain, yield, 6.35 mm	5.7	%	ASTM D 638
Tensile Strain, break, 6.35 mm	13.1	%	ASTM D 638
Flexural Stress, yield, 6.4 mm	66	MPa	ASTM D 790
Flexural Modulus, 6.4 mm	2130	MPa	ASTM D 790
IMPACT			
FOAM - IMPACT 6.4 mm Wt Reduction	10	%	-
Izod Impact, unnotched, 23°C, 6.4mm	277	J/m	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	57	J	ASTM D 3763
THERMAL			
FOAM - THERMAL 6.4mm Wt Reduction	10	%	-
HDT, 0.45 MPa, 6.4 mm, unannealed	89	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	78	°C	ASTM D 648
Relative Temp Index, Elec	85	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	85	°C	UL 746B
PHYSICAL			
FOAM - PHYSICAL 6.4mm Wt Reduction	10	%	-
Specific Gravity	1.11	-	ASTM D 792
Specific Gravity, foam molded	1	-	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm	0.6 – 0.8	%	SABIC method
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
FLAME CHARACTERISTICS			
FOAM - Flame Class Minimum Density	1	g/cm ³	-
UL Recognized, 94V-1 Flame Class Rating	2.99	mm	UL 94
UL Recognized, 94-5VA Rating	4.69	mm	UL 94
Radiant Panel Listing	☑	-	UL Tested

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UV-light, water exposure/immersion	F2	-	UL 746C
STRUCTURAL FOAM MOLDING			
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	

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