+135-3858-6433 (GuangDong)
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NORYL™ Resin FNH2160

Americas: COMMERCIAL

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

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
FOAM - MECHANICAL 6.4 mm Wt Reduction	20	%	-
Tensile Stress, yield, 6.35 mm	360	kgf/cm²	ASTM D 638
Tensile Stress, break, 6.35 mm	340	kgf/cm²	ASTM D 638
Tensile Strain, break, 6.35 mm	12	%	ASTM D 638
Flexural Stress, yield, 6.4 mm	710	kgf/cm²	ASTM D 790
Flexural Modulus, 6.4 mm	22900	kgf/cm²	ASTM D 790
IMPACT			
FOAM - IMPACT 6.4 mm Wt Reduction	20	%	-
Izod Impact, unnotched, 23°C, 6.4mm	36	cm-kgf/cm	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	295	cm-kgf	ASTM D 3763
THERMAL			
FOAM - THERMAL 6.4mm Wt Reduction	20	%	-
HDT, 0.45 MPa, 6.4 mm, unannealed	93	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D 648
Relative Temp Index, Elec	65	°C	UL 746B
Relative Temp Index, Mech w/impact	65	°C	UL 746B
Relative Temp Index, Mech w/o impact	65	°C	UL 746B
PHYSICAL			
FOAM - PHYSICAL 6.4mm Wt Reduction	20	%	-
Specific Gravity	1.12	-	ASTM D 792
Specific Gravity, foam molded	0.88	-	ASTM D 792
Water Absorption, 24 hours	0.07	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Volume Rate, MVR at 280°C/5.0 kg	36	cm³/10 min	ISO 1133

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
FLAME CHARACTERISTICS			
FOAM - Flame Class Minimum Density	0.85	g/cm³	-
UL Recognized, 94V-1 Flame Class Rating (3)	3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	6	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3.9	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
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

• Drying is not required/recommended.