

LNP* Thermocomp* Compound Noryl_FM3020 Americas: COMMERCIAL

LNP* Thermocomp* Noryl_FM3020 compound is GR/MR 30%, high modulus structural foam. 10% weight reduction, 0.250" wall thickness.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
FOAM - MECHANICAL 6.4 mm Wt Reduction	10	%	-
Tensile Stress, yield, 6.35 mm	72	MPa	ASTM D 638
Tensile Strain, yield, 6.35 mm	2	%	ASTM D 638
Flexural Stress, yield, 6.4 mm	104	MPa	ASTM D 790
Flexural Modulus, 6.4 mm	6550	MPa	ASTM D 790
Hardness, Rockwell M	83	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	100	mg/1000cy	ASTM D 1044
Coefficient of Friction on self, Static	0.54	-	ASTM D 1894
Coefficient of Friction on steel, Static	0.51	-	ASTM D 1894
IMPACT			
	Value	Unit	Standard
FOAM - IMPACT 6.4 mm Wt Reduction	10	%	-
Izod Impact, notched, 23°C, 6.4mm	96	J/m	ASTM D 256
THERMAL			
	Value	Unit	Standard
FOAM - THERMAL 6.4mm Wt Reduction	10	%	-
HDT, 0.45 MPa, 6.4 mm, unannealed	118	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	110	°C	ASTM D 648
CTE, -40°C to 95°C, flow	2.34E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	3.42E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
PHYSICAL			
	Value	Unit	Standard
FOAM - PHYSICAL 6.4mm Wt Reduction	10	%	-
Weight Reduction	10	%	SABIC Method
Specific Gravity	1.32	-	ASTM D 792
Specific Gravity, foam molded	1.19	-	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm	0.25	%	SABIC Method
Mold Shrinkage, xflow, 6.4 mm	0.3	%	SABIC Method
Poisson's Ratio	0.3	-	ASTM D 638
ELECTRICAL			
	Value	Unit	Standard
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20	%	-
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Surface Resistivity	1.E+17	Ohm	ASTM D 257
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}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A

FLAME CHARACTERISTICS	Value	Unit	Standard
FOAM - Flame Class Minimum Density	1.12	g/cm ³	-
UL Recognized, 94V-1 Flame Class Rating (3)	2.89	mm	UL 94
UL Recognized, 94-5VA Rating (3)	2.89	mm	UL 94

Source GMD, last updated:12/04/1989

Processing

Parameter	Value	Unit
Structural Foam Molding		
Blowing Agent, Physical System	Nitrogen Gas	-
Blowing Agent, Chemical System	FNC30X	-
Concentration Range (Blowing Agent)	1 - 3	%
Recommended Concentration (Blowing Agent)	2	%
Drying Temperature (Resin)	105 - 110	°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	260 - 290	°C
Mold Temperature	65 - 80	°C

Source GMD, last updated:12/04/1989

- Drying is not required/recommended.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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