

LNP* Thermocomp* Compound RF004XXH_1H5D001

Americas: COMMERCIAL

Also known as: LNP* Thermocomp* Compound RF-1004 HC

Product reorder name: RF004XXH_1H5D001

LNP THERMOCOMP* RF004XXH is a compound based on Nylon 66 resin containing Glass Fiber. Characteristic of this grade is Healthcare.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break	1590	kgf/cm ²	ASTM D 638
Tensile Strain, break	3.6	%	ASTM D 638
Tensile Modulus, 50 mm/min	73100	kgf/cm ²	ASTM D 638
Flexural Stress	2350	kgf/cm ²	ASTM D 790
Flexural Modulus	59700	kgf/cm ²	ASTM D 790
Tensile Stress, break	159	MPa	ISO 527
Tensile Strain, break	3.7	%	ISO 527
Tensile Modulus, 1 mm/min	7300	MPa	ISO 527
Flexural Stress	241	MPa	ISO 178
Flexural Modulus	7000	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	84	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	10	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	116	cm-kgf	ASTM D 3763
Multiaxial Impact	25	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	56	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	260	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	247	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.78E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.92E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.88E-05	1/°C	ISO 11359-2

(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±176°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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -40°C to 40°C, xflow	7.94E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	221	°C	ISO 75/Af
PHYSICAL			
Density	1.295	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.8	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.2	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.47	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.24	%	ISO 294
Wear Factor Washer	80	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.68	-	ASTM D 3702 Modified
Static COF	0.52	-	ASTM D 3702 Modified
Density	1.29	g/cm ³	ISO 1183

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15 - 0.25	%
Melt Temperature	280 - 305	°C
Front - Zone 3 Temperature	295 - 305	°C
Middle - Zone 2 Temperature	280 - 295	°C
Rear - Zone 1 Temperature	265 - 275	°C
Mold Temperature	95 - 110	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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