



## LNP™ THERMOCOMP™ Compound RF003XXH

### Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound RF-1003 HC

Product reorder name: RF003XXH

LNP THERMOCOMP RF003XXH is a compound based on Nylon 66 containing 15% Glass Fiber. Added feature of this grade is: Healthcare.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, brk, Type I, 5 mm/min	1050	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	52200	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1740	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	45900	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, break, 5 mm/min	97	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	5160	MPa	ISO 527
Flexural Stress	156	MPa	ISO 178
Flexural Modulus, 2 mm/min	3950	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	44	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Multiaxial Impact	19	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	67	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	27	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	256	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	240	°C	ASTM D 648
CTE, -30°C to 30°C, flow	5.3E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	8.E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	248	°C	ISO 75/Bf

(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.

(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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	212	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.22	-	ASTM D 792
Density	1.22	g/cm <sup>3</sup>	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	1.1	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	1.6	%	ISO 62

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
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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