

## LNP\* Thermocomp\* Compound YF002

### Americas: COMMERCIAL

Also known as: LNP\* Thermocomp\* Compound YF-1002 HM

Product reorder name: YF002

LNP\* Thermocomp\* YF002 is a compound based on Poyester Elastomer containing Glass Fiber. Characteristic of this grade is: High Modulus.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	610	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	590	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	9	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	13	%	ASTM D 638
Tensile Modulus, 5 mm/min	25800	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	20300	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 5 mm/min	60	MPa	ISO 527
Tensile Stress, break, 5 mm/min	59	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	9	%	ISO 527
Tensile Strain, break, 5 mm/min	12	%	ISO 527
Tensile Modulus, 1 mm/min	2290	MPa	ISO 527
Flexural Stress	62	MPa	ISO 178
Flexural Modulus, 2 mm/min	1860	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	100	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	16	cm-kgf/cm	ASTM D 256
Multiaxial Impact	91	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	61	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	64	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	205	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	184	°C	ASTM D 648

(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.

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
CTE, -30°C to 30°C, flow	6.7E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	1.35E-04	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	194	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	153	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.3	-	ASTM D 792
Density	1.3	g/cm <sup>3</sup>	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.1	%
Melt Temperature	215 - 240	°C
Front - Zone 3 Temperature	225 - 240	°C
Middle - Zone 2 Temperature	205 - 215	°C
Rear - Zone 1 Temperature	180 - 195	°C
Mold Temperature	25 - 55	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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