LNP™ THERMOCOMP™ Compound UF0067W

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound UF-1006 HW Z270

Product reorder name: UF0067W

LNP THERMOCOMP UF0067W is a compound based on Polyphthalamide resin containing 30% glass fiber. Added features of this material include: Hot Water Moldable, Non-Brominated & Non-Chlorinated Flame Retardant.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1450	kgf/cm²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D 638
Tensile Modulus, 5 mm/min	107500	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2170	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	104000	kgf/cm²	ASTM D 790
Tensile Stress, break, 5 mm/min	128	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.9	%	ISO 527
Tensile Modulus, 1 mm/min	11310	MPa	ISO 527
Flexural Stress	189	MPa	ISO 178
Flexural Modulus, 2 mm/min	9130	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	67	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	6	cm-kgf/cm	ASTM D 256
Multiaxial Impact	18	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	32	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	299	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	281	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.34E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.04E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.11E-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°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[1]	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	277	°C	ISO 75/Af
PHYSICAL			
Density	1.45	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.2	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.2 - 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.2 - 1.5	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.2 - 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.2 - 1.5	%	ISO 294
Density	1.45	g/cm³	ISO 1183
ELECTRICAL			
Dielectric Strength, in oil, 0.8 mm	29.7	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	4.05	-	ASTM D 150
Relative Permittivity, 1 MHz	3.82	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0115	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0128	-	ASTM D 150
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	90 - 110	°C
Drying Time	3 - 5	hrs
Melt Temperature	280 - 320	°C
Nozzle Temperature	280 - 320	°C
Front - Zone 3 Temperature	280 - 320	°C
Middle - Zone 2 Temperature	280 - 320	°C
Rear - Zone 1 Temperature	250 - 280	°C
Mold Temperature	90 - 120	°C
Back Pressure	1 - 5	MPa
Screw Speed	30 - 100	rpm

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