LNP™ THERMOCOMP™ Compound UC006H

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound UC-1006
Product reorder name: UC006H

LNP THERMOCOMP™ UC006H is a compound based on Polyphthalamide resin containing 30% Carbon Fiber. Added features of this material include: Electrically Conductive, Healthcare.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break	2920	kgf/cm²	ASTM D 638
Tensile Strain, break	1.5	%	ASTM D 638
Tensile Modulus, 50 mm/min	266300	kgf/cm²	ASTM D 638
Flexural Stress	4270	kgf/cm²	ASTM D 790
Flexural Modulus	230800	kgf/cm²	ASTM D 790
Tensile Stress, break	263	MPa	ISO 527
Tensile Strain, break	1.3	%	ISO 527
Tensile Modulus, 1 mm/min	28160	MPa	ISO 527
Flexural Stress	413	MPa	ISO 178
Flexural Modulus	22320	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	84	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	7	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	90	cm-kgf	ASTM D 3763
Multiaxial Impact	23	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	51	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	285	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	3.96E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.89E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.02E-05	1/°C	ISO 11359-2

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(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
PHYSICAL			
Density	1.324	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.31	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.2	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.6	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.16	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.62	%	ISO 294
Wear Factor Washer	6	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.27	-	ASTM D 3702 Modified
Static COF	0.21	-	ASTM D 3702 Modified
Density	1.32	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.66	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15	%
Melt Temperature	315 - 330	°C
Front - Zone 3 Temperature	325 - 340	°C
Middle - Zone 2 Temperature	315 - 325	°C
Rear - Zone 1 Temperature	310 - 320	°C
Mold Temperature	140 - 165	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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