

LNPTM THERMOCOMPTM COMPOUND UC006H

UC-1006

DESCRIPTION

LNP THERMOCOMP UC006H compound is based on Polyphthalamide (PPA) resin containing 30% carbon fiber. Added features of this grade include: Electrically Conductive, Healthcare.

GENERAL INFORMATION	
Features	Electrically Conductive, Healthcare/Formula lock, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyphthalamide (PPA)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, break	287	MPa	ASTM D638
Tensile Strain, break	1.5	%	ASTM D638
Tensile Modulus, 5 mm/min	26110	MPa	ASTM D638
Flexural Stress	419	MPa	ASTM D790
Flexural Modulus	22630	MPa	ASTM D790
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 ⁽¹⁾			
Izod Impact, unnotched, 23°C	827	J/m	ASTM D4812
Izod Impact, notched, 23°C	74	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	8	J	ASTM D3763
Multiaxial Impact	2	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	51	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	6	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	285	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	3.96E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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
PHYSICAL ⁽¹⁾			
Density	1.32	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.31	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.6	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.16	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.62	%	ISO 294
Wear Factor Washer	6	10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.27	-	ASTM D3702 Modified: Manual
Static COF	0.21	-	ASTM D3702 Modified: Manual
Density	1.32	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.66	%	ISO 62
INJECTION MOLDING ⁽³⁾			
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	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) 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.
- (3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>

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