LNP™ THERMOCOMP™ Compound UF006H

UF-1006

DESCRIPTION

LNP THERMOCOMP UF006H compound is based on Polyphthalamide (PPA) resin containing 30% glass fiber. Added features of this grade include: Healthcare.

GENERAL INFORMATION	
Features	Healthcare/Formula lock, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
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, yield	208	MPa	ISO 527
Tensile Stress, break	208	MPa	ISO 527
Tensile Strain, yield	2	%	ISO 527
Tensile Strain, break	2	%	ISO 527
Tensile Modulus, 1 mm/min	12440	MPa	ISO 527
Tensile Stress, yield	224	MPa	ASTM D638
Flexural Stress	294	MPa	ISO 178
Flexural Modulus	11000	MPa	ISO 178
Tensile Stress, break	224	MPa	ASTM D638
Tensile Strain, yield	2.2	%	ASTM D638
Tensile Strain, break	2.2	%	ASTM D638
Tensile Modulus, 50 mm/min	13100	MPa	ASTM D638
Flexural Stress	289	MPa	ASTM D790
Flexural Modulus	11030	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	47	kJ/m²	ISO 180/1U
Multiaxial Impact	3	J	ISO 6603
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Izod Impact, unnotched, 23°C	683	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	7	J	ASTM D3763

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	293	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	282	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	2.80E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.10E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	305	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	287	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.88E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.04E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.52	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs [2]	0.37	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.77	%	ISO 294
Density	1.53	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.8	%	ASTM D955
INJECTION MOLDING [3]			
Drying Temperature	120	°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	150 – 170	°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.

MORE INFORMATION

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

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