LNP™ THERMOCOMP™ Compound UC008H

UC-1008

DESCRIPTION

LNP THERMOCOMP UC008H compound is based on Polyphthalamide (PPA) resin containing 40% 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 (PCR contains <50ppm total organic fluorine content)
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 20260210

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	261	MPa	ASTM D638
Tensile Strain, break	1	%	ASTM D638
Tensile Modulus, 50 mm/min	33780	MPa	ASTM D638
Flexural Stress	441	MPa	ASTM D790
Flexural Modulus	26820	MPa	ASTM D790
Tensile Stress, break	232	MPa	ISO 527
Tensile Strain, break	1.3	%	ISO 527
Tensile Modulus, 1 mm/min	35530	MPa	ISO 527
Flexural Stress	425	MPa	ISO 178
Flexural Modulus	26590	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	328	J/m	ASTM D4812
Izod Impact, notched, 23°C	58	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	7	J	ASTM D3763
Multiaxial Impact	5	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	>248	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	>250	°C	ISO 75/Af
PHYSICAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.38	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.4	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.7 – 0.9	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.7 – 0.9	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	0.7 – 0.9	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	0.7 – 0.9	%	ISO 294
Moisture Absorption (23°C / 50% RH)	0.46 – 1.38	%	ISO 62
ELECTRICAL (1)			
Volume Resistivity	1.E+02 – 1.E+04	Ω.cm	ASTM D257
Surface Resistivity	1.E+02 – 1.E+04	Ω	ASTM D257
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.

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