LNP™ THERMOCOMP™ COMPOUND TF006H

DESCRIPTION

LNP THERMOCOMP TF006H is a compound based on Polyurethane (TPU) containing 30% Glass Fiber. Added features include: Healthcare

GENERAL INFORMATION	
Features	Healthcare/Formula lock, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyurethane, Unspecified (PUR, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	50	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	49	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	16.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	16	%	ASTM D638
Tensile Modulus, 50 mm/min	1480	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	58	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1690	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	51	MPa	ISO 527
Tensile Stress, break, 5 mm/min	51	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	15.5	%	ISO 527
Tensile Strain, break, 5 mm/min	16	%	ISO 527
Tensile Modulus, 1 mm/min	1800	MPa	ISO 527
Flexural Modulus, 2 mm/min	2180	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	1750	J/m	ASTM D4812
Izod Impact, notched, 23°C	512	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	19	J	ASTM D3763
Multiaxial Impact	17	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	131	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	41	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	167	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	78	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.3E-04	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	2.84E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.31E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	167	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	85	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.47	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.36	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.5 – 0.8	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	0.15	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	0.4	%	ISO 294
Density	1.47	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.5	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	95 – 105	°C	
Drying Time	2	Hrs	
Maximum Moisture Content	0.03	%	
Melt Temperature	210	°C	
Nozzle Temperature	205 – 225	°C	
Front - Zone 3 Temperature	200 – 220	°C	
Middle - Zone 2 Temperature	195 – 215	°C	
Rear - Zone 1 Temperature	195 – 210	°C	
Mold Temperature	15 – 45	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	40 – 80	%	

(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.

DISCLAIMER