LNP™ THERMOCOMP™ Compound XF006S

XF-1006 HS

DESCRIPTION

LNP THERMOCOMP XF006S compound is based on Amorphous Nylon resin containing 30% glass fiber. Added features of this grade include: Heat Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide, Unspecified (Nylon, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20240711

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	141	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	9020	MPa	ISO 527
Flexural Stress	214	MPa	ISO 178
Flexural Modulus, 2 mm/min	8910	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	138	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Modulus, 50 mm/min	9650	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	209	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	208	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9060	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m²	ISO 180/1U
Multiaxial Impact	3	J	ISO 6603
Izod Impact, notched, 23°C	56	J/m	ASTM D256
Izod Impact, unnotched, 23°C	632	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	11	J	ASTM D3763
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	137	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	142	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	138	°C	ASTM D648
CTE, -30°C to 30°C, flow	3.50E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.40E-05	1/°C	ASTM D696
PHYSICAL (1)			
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
Specific Gravity	1.36	-	ASTM D792
Density	1.36	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.22	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.2 – 0.4	%	ASTM D955
INJECTION MOLDING (3)			
Drying Temperature	100 – 120	°C	
Drying Time	6 – 12	Hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	260 – 300	°C	
Front - Zone 3 Temperature	290 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 270	°C	
Mold Temperature	50 – 100	°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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