LNP™ THERMOCOMP™ Compound MF002S

MFX-1002 HS
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP MF002S compound is based on Polypropylene (PP) resin containing 10% 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	Polypropylene, Unspecified (PP, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Sport/Leisure, Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	46	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	42	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6.7	%	ASTM D638
Tensile Modulus, 50 mm/min	2980	MPa	ASTM D638
Flexural Stress	75	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2390	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	46	MPa	ISO 527
Tensile Stress, break, 5 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.4	%	ISO 527
Tensile Strain, break, 5 mm/min	5.8	%	ISO 527
Tensile Modulus, 1 mm/min	2970	MPa	ISO 527
Flexural Stress	64	MPa	ISO 178
Flexural Modulus, 2 mm/min	2330	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	488	J/m	ASTM D4812
Izod Impact, notched, 23°C	38	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	29	kJ/m²	ISO 180/1U

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	154	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D648
CTE, -30°C to 30°C, flow	6.6E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	99	°C	ISO 75/Af
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	0.97	-	ASTM D792
Density	0.96	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [3]	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	1 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
ELECTRICAL [1]			
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥1	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-103716364	-	-
UL Recognized, 94HB Flame Class Rating	≥1	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	850	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	850	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	850	°C	IEC 60695-2-12
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	225 – 250	°C	
Front - Zone 3 Temperature	240 – 250	°C	
Middle - Zone 2 Temperature	215 – 225	°C	
Rear - Zone 1 Temperature	195 – 205	°C	
Mold Temperature	30 – 50	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

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(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(4) 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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