LNP™ THERMOCOMP™ COMPOUND AB002

AB-1002
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP AB002 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 10% glass bead.

GENERAL INFORMATION	
Features	Low Warpage, Dimensional stability, No PFAS intentionally added
Fillers	Glass Bead
Polymer Types	Acrylonitrile Butadiene Styrene (ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	32	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	29	%	ASTM D638
Tensile Modulus, 50 mm/min	2650	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	64	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	63	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2590	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	34	MPa	ISO 527
Tensile Stress, break, 5 mm/min	30	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.2	%	ISO 527
Tensile Strain, break, 5 mm/min	24	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress	60	MPa	ISO 178
Flexural Modulus, 2 mm/min	2410	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	600	J/m	ASTM D4812
Izod Impact, notched, 23°C	120	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	13	J	ASTM D3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	34	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	93	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	81	°C	ASTM D648
CTE, -30°C to 30°C, flow	8.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.9E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	92	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	79	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.12	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.22	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.6 – 0.8	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.8 – 1	%	ASTM D955
Density	1.11	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.36	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05 – 0.1	%	
Melt Temperature	260	°C	
Front - Zone 3 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	230 – 245	°C	
Rear - Zone 1 Temperature	205 – 215	°C	
Mold Temperature	70 – 80	°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.

DISCLAIMER