LNP™ THERMOCOMP™ Compound WF006XXB

DESCRIPTION

LNP THERMOCOMP WF006XXB compound is based on Polybutylene Terephthalate (PBT) resin containing 30% glass fiber. Added features of this grade include: Medium Flow, Healthcare, Low Extractables, Biocompatible (ISO10993 or USP Class VI).

This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

GENERAL INFORMATION	
Features	Biocompatability-ISO10993, Food contact, Healthcare/Formula lock, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging, Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20260318

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	120	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	120	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 5 mm/min	9300	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	189	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7580	MPa	ASTM D790
Hardness, Rockwell R	118	-	ASTM D785
Tensile Stress, yield, 5 mm/min	125	MPa	ISO 527
Tensile Stress, break, 5 mm/min	125	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	195	MPa	ISO 178
Flexural Modulus, 2 mm/min	8500	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	801	J/m	ASTM D4812
Izod Impact, notched, 23°C	85	J/m	ASTM D256
Izod Impact, notched, -30°C	80	J/m	ASTM D256

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	10	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m²	ISO 179/1eA
THERMAL [1]			
Vicat Softening Temp, Rate B/50	215	°C	ASTM D1525
HDT, 0.45 MPa, 6.4 mm, unannealed	215	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D648
CTE			
-40°C to 40°C, flow	2.52E-05	1/°C	ASTM E831
60°C to 138°C, flow	2.52E-05	1/°C	ASTM E831
-40°C to 40°C, flow	2.52E-05	1/°C	ISO 11359-2
-40°C to 40°C, xflow	1.2E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	215	°C	ISO 306
Vicat Softening Temp, Rate B/120	220	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	200	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.53	-	ASTM D792
Specific Volume	0.66	cm³/g	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [2]	0.3 – 0.8	%	SABIC method
Mold Shrinkage, flow, 1.5-3.2 mm [2]	0.3 – 0.5	%	SABIC method
Mold Shrinkage, flow, 3.2-4.6 mm [2]	0.5 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 1.5-3.2 mm [2]	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2-4.6 mm [2]	0.6 – 0.9	%	SABIC method
Melt Flow Rate, 250°C/2.16 kgf	17	g/10 min	ASTM D1238
Density	1.53	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.26	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	13	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Volume Resistivity	>3.2E+16	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	18.7	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	24.8	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.8	-	ASTM D150
Relative Permittivity, 1 MHz	3.7	-	ASTM D150
Dissipation Factor, 100 Hz	0.002	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
INJECTION MOLDING [3]			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Temperature	250 – 265	°C	
Nozzle Temperature	245 – 260	°C	
Front - Zone 3 Temperature	250 – 265	°C	
Middle - Zone 2 Temperature	245 – 260	°C	
Rear - Zone 1 Temperature	240 – 255	°C	
Mold Temperature	65 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 80	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.025 – 0.038	mm	

(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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