LNP™ THERMOCOMP™ Compound WX15003

DESCRIPTION

LNP THERMOCOMP WX15003 compound is based on Polybutylene Terephthalate (PBT) resin containing 45 % glass fiber/mineral. Added features of this grade include UV stabilized and high specific gravity.

GENERAL INFORMATION	
Features	Low Warpage, High stiffness/Strength, Weatherable/UV stable, 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	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20240411

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Taber Abrasion, CS-17, 1 kg	76	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	100	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	8000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	140	MPa	ISO 178
Flexural Modulus, 2 mm/min	7400	MPa	ISO 178
Ball Indentation Hardness, H358/30	145	MPa	ISO 2039-1
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	33	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	31	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
THERMAL [1]			
Thermal Conductivity	0.33	W/m·°C	ISO 8302
CTE, 23°C to 80°C, flow	3.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, flow	2.5E-05	1/°C	ISO 11359-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 150°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	220	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	180	°C	ISO 75/Ae
PHYSICAL [1]			
Mold Shrinkage on Tensile Bar, flow [2]	0.2 – 0.6	%	SABIC method
Density	1.83	g/cm³	ISO 1183
Melt Volume Rate, MVR at 265°C/1.2 kg	11	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Relative Permittivity, 1 MHz	3.5	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.013	-	IEC 60250
Relative Permittivity, 50/60 Hz	3.6	-	IEC 60250
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 750°C, passes at	3.2	mm	IEC 60695-2-12
INJECTION MOLDING [3]			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 280	°C	
Nozzle Temperature	245 – 270	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	240 – 260	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	60 – 100	°C	

(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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