

# LNPT<sup>™</sup> COLORCOMP<sup>™</sup> COMPOUND W1000PRB

## DESCRIPTION

LNP COLORCOMP W1000PRB compound is based on Polybutylene Terephthalate (PBT) resin. Added features of this grade include: Healthcare, Food Contact Compliant, Biocompatible (ISO 10993 or USP Class VI), EtO and Gamma Sterilizable, Mold Release.

GENERAL INFORMATION	
Features	Aesthetics/Visual effects, Biocompatibility-ISO10993, Food contact, Healthcare/Formula lock, Enhanced mold release, Sterilizable, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Compounding Extrusion, Injection Molding

  

INDUSTRY	SUB INDUSTRY
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 20241028

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	26	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3.7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	10	%	ASTM D638
Tensile Modulus, 5 mm/min	2700	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	89	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2500	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	49	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.2	%	ISO 527
Tensile Strain, break, 50 mm/min	10	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Strength, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2260	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	30	J/m	ASTM D256
Izod Impact, notched, -30°C	30	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	20	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	2	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	2	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>THERMAL <sup>(1)</sup></b>			
Vicat Softening Temp, Rate B/50	180	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	150	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	54	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	183	°C	ISO 306
Vicat Softening Temp, Rate B/120	180	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	49	°C	ISO 75 /Af
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.31	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup>	1.5 – 2	%	SABIC method
Melt Flow Rate, 265°C/2.16kgf	80	g/10 min	ASTM D1238
Density	1.31	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.4	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 265°C/2.16 kg	70	cm <sup>3</sup> /10 min	ISO 1133
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	245 – 260	°C	
Nozzle Temperature	240 – 255	°C	
Front - Zone 3 Temperature	245 – 260	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Mold Temperature	50 – 75	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.013 – 0.025	mm	
<b>COMPOUNDING EXTRUSION</b>			
Drying Temperature	110 – 120	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	
Melt Temperature	245 – 260	°C	
Barrel - Zone 1 Temperature	200 – 230	°C	
Barrel - Zone 2 Temperature	240 – 255	°C	
Barrel - Zone 3 Temperature	240 – 275	°C	
Barrel - Zone 4 Temperature	240 – 275	°C	
Adapter Temperature	240 – 275	°C	
Die Temperature	240 – 275	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Waterbath Temperature	25 – 35	°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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