LNP™ COLORCOMP™ COMPOUND N1000EXB

DESCRIPTION

High heat PC/ABS blend offering good flow and excellent impact. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI).

TYPICAL PROPERTY VALUES

Revision 20200108

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	57	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	47	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	88	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D 790
Taber Abrasion, CS-17, 1 kg	63	mg/1000cy	ASTM D 1044
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	100	%	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	96	MPa	ISO 2039-1
Hardness, Rockwell R	115	-	ISO 2039-2
IMPACT			
Izod Impact, notched, 23°C	580	J/m	ASTM D 256
Izod Impact, notched, -30°C	480	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	54	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	30	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	50	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	30	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	130	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	112	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m·°C	ISO 8302

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CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C, by VDE	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	126	°C	ISO 306
Vicat Softening Temp, Rate B/120	128	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	122	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	102	°C	ISO 75/Ae
Relative Temp Index, Elec [1]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.15	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	24	g/10 min	ASTM D 1238
Density	1.15	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.6	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	8	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	22	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.007	-	IEC 60250
Comparative Tracking Index [2]	250	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.2	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.2	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-103956764	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
Glow Wire Flammability Index, 3.5 mm	960	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.5 mm	725	°C	IEC 60695-2-13
Oxygen Index (LOI)	23	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	100-110	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Nozzle Temperature	240 – 280	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Temperature	260 – 290	°C	
Front - Zone 3 Temperature	250 – 290	°C	
Middle - Zone 2 Temperature	250 – 290	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	

(1) 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.

(2) Value shown here is based on internal measurement.

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