LNP™ COLORCOMP™ COMPOUND W1000EXP

REGION AMERICAS

DESCRIPTION

LNP* COLORCOMP* W1000EXP is an unreinforced compound based on PBT resin. Added feature of this grade is a typical viscosity of 5000-7000.

TYPICAL PROPERTY VALUES

Revision 20190731

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	200	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	82	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	82	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D 790
Hardness, Rockwell R	117	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D 4812
Izod Impact, notched, 23°C	53	J/m	ASTM D 256
Gardner, 23°C	40	J	ASTM D 3029
Modified Gardner, 23°C	40	J	ASTM D 3029
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	54	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.39E-04	1/°C	ASTM E 831
Relative Temp Index, Elec [1]	120	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	120	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.31	-	ASTM D 792
Specific Volume	0.76	cm³/g	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Mold Shrinkage, flow, 0.75-2.3 mm	0.9 – 1.6	%	SABIC method
Mold Shrinkage, flow, 2.3-4.6 mm	1.5 – 2.3	%	SABIC method
Mold Shrinkage, xflow, 0.75-2.3 mm	1 – 1.7	%	SABIC method
Mold Shrinkage, xflow, 2.3-4.6 mm	1.6 – 2.4	%	SABIC method
Melt Viscosity	600	Pa-s	SABIC method
ELECTRICAL			
Volume Resistivity	>4.E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 1.6 mm	23.2	kV/mm	ASTM D 149
Dielectric Strength, in air, 3.2 mm	15.7	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	23.2	kV/mm	ASTM D 149

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dielectric Strength, in oil, 3.2 mm	15.7	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.3	-	ASTM D 150
Relative Permittivity, 1 MHz	3.1	-	ASTM D 150
Dissipation Factor, 100 Hz	0.002	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥6	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 4	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	4	PLC Code	ASTM D 495
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E121562-103952988	-	-
UL Recognized, 94HB Flame Class Rating	≥0.84	mm	UL 94
INJECTION MOLDING			
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	

(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.

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