LNP™ COLORCOMP™ COMPOUND A1000E

A1000E

DESCRIPTION

LNP* COLORCOMP* A1000E is a compound based on ABS. Added features of this grade include: Very high impact, toughness/rigidity, good fatigue resistance.

TYPICAL PROPERTY VALUES

Revision 20191218

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	44	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	33	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	26	%	ASTM D 638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	72	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D 790
Hardness, Rockwell R	111	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	47	MPa	ISO 527
Tensile Stress, break, 50 mm/min	34	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.7	%	ISO 527
Tensile Strain, break, 50 mm/min	17	%	ISO 527
Tensile Modulus, 1 mm/min	2270	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	71	MPa	ISO 178
Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	370	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	31	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	27	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	28	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	98	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	95	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	80	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.82E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.64E-05	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50	98	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	81	°C	ISO 75/Af
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL			
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.8	%	SABIC method
Melt Flow Rate, 230°C/3.8 kg	3.7	g/10 min	ASTM D 1238
Melt Viscosity, 240°C, 1000 sec-1	2450	Poise	ASTM D 3825
Density	1.04	g/cm³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	14	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80 – 95	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	220 – 260	°C	
Nozzle Temperature	220 – 260	°C	
Front - Zone 3 Temperature	215 – 240	°C	
Middle - Zone 2 Temperature	205 – 225	°C	
Rear - Zone 1 Temperature	190 – 210	°C	
Mold Temperature	50 – 70	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	50 – 70	%	
Vent Depth	0.038 – 0.051	mm	

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