LNP™ COLORCOMP™ COMPOUND NX06514

DESCRIPTION

LNP COLORCOMP NX06514 is an unfilled Polycarbonate+ABS resin. Added feature of this material are: non-chlorinated, non-brominated flame retardant with UL V0 & 5VB flame rating, improved heat resistance, balanced flow and impact. This grade is an excellent candidate for a wide variety of applications including appliances, lighting and electrical.

GENERAL INFORMATION	
Features	Flame Retardant, Aesthetics/Visual effects
Fillers	Unreinforced
Polymer Types	Polycarbonate + ABS (PC+ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries, Bus, Automotive Exteriors, Recreational/Specialty Vehicles
Building and Construction	Building Component, Water Management
Consumer	Home Appliances, Personal Recreation, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Hygiene and Healthcare	Surgical devices, General Healthcare, Patient Testing
Industrial	Electrical, Defense
Packaging	Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20260305

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	102	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2650	MPa	ASTM D790
Hardness, Rockwell R	123	-	ASTM D785
Taber Abrasion, CS-17, 1 kg	54	mg/1000cy	ASTM D1044
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	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	2800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
Ball Indentation Hardness, H358/30	116	MPa	ISO 2039-1
Hardness, Rockwell R	123	-	ISO 2039-2
IMPACT [1]			
Izod Impact, notched, 23°C	534	J/m	ASTM D256

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, -30°C	160	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	61	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	54	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	44	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	14	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL [1]			
Vicat Softening Temp, Rate B/50	112	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	104	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	95	°C	ASTM D648
CTE, -30°C to 30°C, flow	7.2E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.2E-05	1/°C	ASTM D696
Thermal Conductivity	0.2	W/m-°C	ASTM C177
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
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			
100°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	118	°C	ISO 306
Vicat Softening Temp, Rate B/50	110	°C	ISO 306
Vicat Softening Temp, Rate B/120	112	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	103	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	90	°C	ISO 75/Ae
Relative Temp Index, Elec [2]	85	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	85	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	85	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.22	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Water Absorption, (23°C/Saturated)	0.4	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [3]	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	10	g/10 min	ASTM D1238
Density	1.22	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.6	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	12	cm³/10 min	ISO 1133

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
ELECTRICAL [1]			
Volume Resistivity	1E+17	Ω.cm	ASTM D257
Dielectric Strength, in oil, 3.2 mm	19.4	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	3	-	ASTM D150
Relative Permittivity, 100 Hz	3	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.005	-	ASTM D150
Dissipation Factor, 100 Hz	0.0049	-	ASTM D150
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	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	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.006	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥2.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-104340812	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥2.5	mm	UL 94
Oxygen Index (LOI)	32	%	ASTM D2863
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.5 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
INJECTION MOLDING [4]			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	245 – 275	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Nozzle Temperature	245 – 275	°C	
Front - Zone 3 Temperature	245 – 275	°C	
Middle - Zone 2 Temperature	220 – 275	°C	
Rear - Zone 1 Temperature	220 – 255	°C	
Mold Temperature	60 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 – 0.076	mm	
Hopper Temperature	60 – 80	°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) 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.

(3) 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.

(4) Back Pressure, Screw Speed, Shot to Cylinder Size and Vent Depth are only mentioned as general guidelines. These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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