LNP™ COLORCOMP™ COMPOUND 9X20038

DESCRIPTION

LNP COLORCOMP 9X20038 compound is based on Polycarbonate / Acrylonitrile styrene acrylate (PC/ASA) blend. Added features of this grade include; increased flow, improved release and easy processing.

GENERAL INFORMATION	
Features	Good Processability, High Flow, Aesthetics/Visual effects, Enhanced mold release, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate + ASA (PC+ASA)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20240715

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Nominal Strain, brk, Type I, 50 mm/min	>75	%	ASTM D638
Tensile Modulus, 50 mm/min	2200	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span [2]	84	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2200	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	>75	%	ISO 527
Tensile Modulus, 1 mm/min	2100	MPa	ISO 527
Flexural Strength, 2 mm/min [2]	76	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
Ball Indentation Hardness, H358/30	120	MPa	ISO 2039-1
Hardness, Rockwell R	115	-	ISO 2039-2
IMPACT [1]			
Izod Impact, notched, 23°C	580	J/m	ASTM D256
Izod Impact, notched, -30°C	140	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	18	kJ/m²	ISO 180/1A
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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	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
Multi-Axial Instrumented Impact Total Energy, 23°C	110	J	ISO 6603-2
Multi-Axial Instrumented Impact Energy @ peak, 23°C	90	J	ISO 6603-2
Multi-Axial Instrumented Impact Total Energy, -30°C	100	J	ISO 6603-2
Multi-Axial Instrumented Impact Energy @ peak, -30°C	95	J	ISO 6603-2
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	111	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	128	°C	ASTM D648
Vicat Softening Temp, Rate B/50	129	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	130	°C	ASTM D1525
CTE, 23°C to 60°C, flow	8.5e-5	1/°C	ASTM E831
CTE, 23°C to 60°C, xflow	8.5e-5	1/°C	ASTM E831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	112	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	130	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	129	°C	ISO 306
Vicat Softening Temp, Rate B/120	130	°C	ISO 306
CTE, 23°C to 60°C, flow	8.5e-5	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.5e-5	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	pass	-	IEC 60695-10-2
PHYSICAL [1]			
Specific Gravity	1.17	-	ASTM D792
Melt Flow Rate, 260°C/5.0 kgf	35	g/10 min	ASTM D1238
Density	1.17	g/cm³	ISO 1183
Melt Volume Rate, MVR at 260°C/5.0 kg	33	cm³/10 min	ISO 1133
Water Absorption, (23°C/saturated)	0.1	%	ISO 62-1
Mold Shrinkage, flow [3]	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow [3]	0.5 – 0.7	%	SABIC method
FLAME CHARACTERISTICS			
Glow Wire Flammability Index, 3.0 mm	775	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.5 mm	750	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	750	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.5 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	775	°C	IEC 60695-2-13
INJECTION MOLDING [4]			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	240 – 280	°C	
Front - Zone 3 Temperature	250 – 290	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Middle - Zone 2 Temperature	250 – 290	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Hopper Temperature	40 – 80	°C	
Mold Temperature	60 – 90	°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) Stress at yield
(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) 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.

DISCLAIMER