

LNPT™ COLORCOMP™ COMPOUND 9X20038

DESCRIPTION

LNPT 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 |
| Fillers | Unreinforced |
| Polymer Types | Polycarbonate + ASA (PC+ASA) |
| Processing Techniques | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|------------|--------------|
| Industrial | Electrical |

TYPICAL PROPERTY VALUES

Revision 20231109

| 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/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 18 | kJ/m ² | ISO 180/1A |
| Izod Impact, unnotched 80*10*4 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*4 -30°C | NB | kJ/m ² | ISO 180/1U |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 60 | kJ/m ² | ISO 179/1eA |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------------|----------------|
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 15 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m ² | 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/cm ³ | ISO 1183 |
| Melt Volume Rate, MVR at 260°C/5.0 kg | 33 | cm ³ /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 | |
| Middle - Zone 2 Temperature | 250 – 290 | °C | |

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|---------------------------|----------------|-------|--------------|
| 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.

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