# LNP™ THERMOCOMP™ AM Compound DC004XXAR1

REGION AMERICAS

## DESCRIPTION

LNP THERMOCOMP DC004XXAR1 compound is based on Polycarbonate (PC) resin containing 20% carbon fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: Higher Stiffness vs. glass fiber, Higher Strength, Higher Temperature Performance and Higher Throughput compared to ABS and PPE, as well as Excellent Ductility and Smooth Surface Finish.

## TYPICAL PROPERTY VALUES

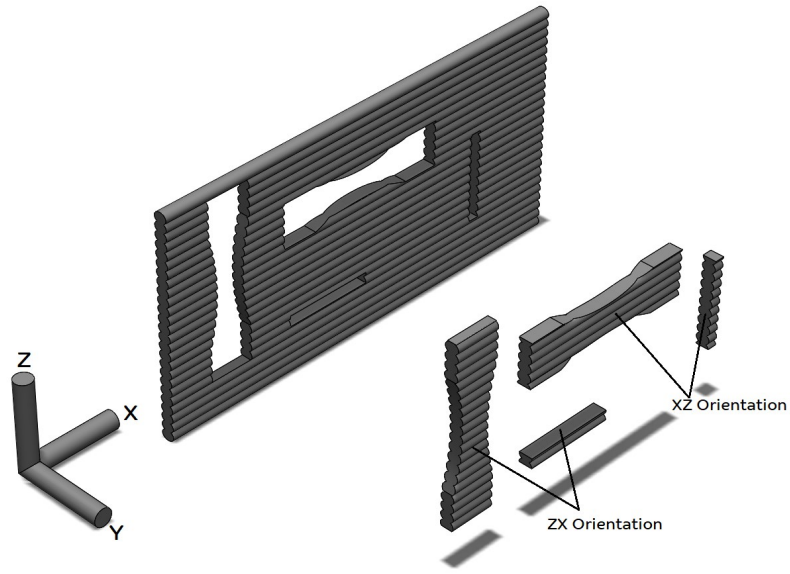
Revision 20251217

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** | | | |
| **Tensile Stress, 5mm/min** [1] | | | |
| XZ Orientation | 124 | MPa | ASTM D638 Modified |
| ZX Orientation | 48 | MPa | ASTM D638 Modified |
| **Tensile Strain, 5mm/min** | | | |
| XZ Orientation | 1.6 | % | ASTM D638 Modified |
| ZX Orientation | 2.0 | % | ASTM D638 Modified |
| **Tensile Stiffness, 5mm/min** | | | |
| XZ Orientation [2] | 11.5 | GPa | ASTM D638 Modified |
| ZX Orientation | 3.0 | GPa | ASTM D638 Modified |
| **Flexural Stress, 5mm/min** | | | |
| XZ Orientation | 66 | MPa | ASTM D790 Modified |
| ZX Orientation | 164 | MPa | ASTM D790 Modified |
| **THERMAL** | | | |
| **HDT, 1.82 MPa, 3.2mm, annealed** | 144 | °C | ASTM D648 |
| **PHYSICAL** | | | |
| **Specific Gravity** | 1.27 | - | ASTM D792 |
| **EXTRUSION** | | | |
| **Extruder L/D** | 24 | - | |
| **Drying Temperature** | 120 | °C | |
| **Drying Time** | 4 | Hrs | |
| **Maximum Moisture Content** | 0.02 | % | |
| **Barrel - Zone 1 Temperature** | 250 – 280 | °C | |
| **Barrel - Zone 2 Temperature** | 260 – 290 | °C | |
| **Barrel - Zone 3 Temperature** | 260 – 290 | °C | |
| **Barrel - Zone 4 Temperature** | 260 – 290 | °C | |
| **Nozzle Temperature** | 260 – 290 | °C | |
| **Melt Temperature** | 260 – 290 | °C | |
| **Bed Temperature** | 100 – 120 | °C | |
| **Extruder Pressure** | <11 | MPa | |

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(1) Modified ASTM E8 used for tensile test samples

(2) Tensile Stiffness (K) is structural property defined as the stress/strain in the linear region of the stress-strain curve. Value depends on the geometry/shape and boundary/surrounding conditions




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