



## KetaSpire® CF10 LS1 AM Filament polyetheretherketone

Ketaspire® CF10 LS1 AM Filament incorporates 10% carbon fiber reinforcement into a PEEK matrix for increased strength. This material provides long-term performance up to 240 °C, including exceptional chemical resistance. These

properties make it particularly suited for metal replacement in critical applications in severe end-use environments, such as Oil & Gas, Aerospace and Automotive.

### General

|                        |                                                                                        |                                                                       |
|------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Material Status        | • Commercial: Active                                                                   |                                                                       |
| Availability           | • Africa & Middle East<br>• Asia Pacific<br>• Europe                                   | • Latin America<br>• North America                                    |
| Filler / Reinforcement | • Carbon Fiber, 10% Filler by Weight                                                   |                                                                       |
| Features               | • Chemical Resistant<br>• Ductile<br>• Flame Retardant<br>• Good Dimensional Stability | • Good Impact Resistance<br>• High Heat Resistance<br>• High Strength |
| Uses                   | • Aerospace Applications<br>• Automotive Applications                                  | • Oil/Gas Applications                                                |
| RoHS Compliance        | • Contact Manufacturer                                                                 |                                                                       |
| Appearance             | • Black                                                                                |                                                                       |
| Forms                  | • Filament                                                                             |                                                                       |
| Processing Method      | • 3D Printing, Fused Filament Fabrication (FFF)                                        |                                                                       |

| Physical                   | Typical Value | Unit | Test method |
|----------------------------|---------------|------|-------------|
| Density / Specific Gravity | 1.33          |      | ASTM D792   |

| Mechanical                 | Typical Value | Unit | Test method |
|----------------------------|---------------|------|-------------|
| Tensile Modulus            | 11000         | MPa  | ASTM D638   |
| Tensile Strength (Break)   | 140           | MPa  | ASTM D638   |
| Tensile Elongation (Break) | 1.7           | %    | ASTM D638   |

| Impact              | Typical Value | Unit | Test method |
|---------------------|---------------|------|-------------|
| Notched Izod Impact | 89            | J/m  | ASTM D256   |

| Thermal             | Typical Value | Unit | Test method |
|---------------------|---------------|------|-------------|
| Melting Temperature | 343           | °C   | ASTM D3418  |

| Additional Information | Typical Value | Unit |
|------------------------|---------------|------|
| Diameter - Filament    | 1.75          | mm   |



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INNOVATION & ADDITIVE TECHNOLOGIES

GOING BEYOND INNOVATION

## KetaSpire® CF10 LS1 AM Filament

polyetheretherketone

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Printing conditions for above data table:

- Filament drying conditions, minimum temperature 4h: 150°C
- Extruder temperature: 390-405°C
- Bed temperature: >200°C
- Printing tool path: 0°

Test specimen parameters:

- First layer: 0.3mm thick
  - Subsequent layers: 0.1mm
  - 100% infill
  - 3 shells
  - Printing speed: 18 mm/s
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### Notes

Typical properties: these are not to be construed as specifications.