# KetaSpire® MS NT1 AM Filament

## Solvay Specialty Polymers - Polyetheretherketone

Wednesday, April 24, 2019

### General Information

**Product Description**

Ketaspire® MS NT1 AM Filament provides long-term performance up to 240 °C, including exceptional chemical resistance, outstanding wear and abrasion 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 | | | |
|---|---|---|---|
| Generic Name | • Polyetheretherketone (PEEK) | | |
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Features | • Chemical Resistant<br>• Ductile | • Flame Retardant<br>• Good Dimensional Stability | • Good Impact Resistance<br>• High Heat Resistance |
| Uses | • Aerospace Applications | • Automotive Applications | • Oil/Gas Applications |
| RoHS Compliance | • Contact Manufacturer | | |
| Appearance | • Natural Color | | |
| Forms | • Filament | | |
| Processing Method | • 3D Printing, Fused Filament Fabrication (FFF) | | |

### ASTM & ISO Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 1.29 | | ASTM D792 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 3120 | MPa | ASTM D638 |
| Tensile Strength (Yield) | 85.0 | MPa | ASTM D638 |
| Tensile Strength (Break) | 48.0 | MPa | ASTM D638 |
| Tensile Elongation (Yield) | 4.8 | % | ASTM D638 |
| Tensile Elongation (Break) | 26 | % | ASTM D638 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact | 81 | J/m | ASTM D256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Melting Temperature | 343 | °C | ASTM D3418 |
| **Additional Information** | **Nominal Value** | **Unit** | |
| Diameter - Filament | 1.75 | mm | |

Printing conditions for above data table:

- Filament drying conditions, minimum temperature 4h: 150°C
- Extruder temperature: 390-450°C
- Bed temperature: >200°C
- Printing tool path: cross hatching in the XY plane

Test specimen parameters:

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

## Notes

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