

KetaSpire® NT1 HC AM Filament

Solvay Specialty Polymers - Polyetheretherketone

Monday, May 13, 2019

General Information

Product Description

Ketaspire® NT1 HC AM Filament provides long-term performance up to 240 °C, including exceptional chemical resistance, outstanding wear and abrasion resistance offered for use in high-performance healthcare applications. These properties make it particularly suited for metal replacement.

General

Generic Name	• Polyetheretherketone (PEEK)		
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Biocompatible • Chemical Resistant • Ductile	• Flame Retardant • Good Dimensional Stability • Good Impact Resistance	• High Heat Resistance
Uses	• Medical Devices • Medical/Healthcare Applications		
Agency Rating	• ISO, 10993		
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	

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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.