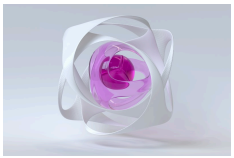
INFINAM®

Product Information

INFINAM® PEEK 9359 F

HIGH VISCOSITY, UNREINFORCED PEEK FILAMENT FOR 3D PRINTING



INFINAM® PEEK 9359F is a filament extruded from natural colored VESTAKEEP® polyether ether ketone (PEEK) resin. The semi-crystalline polymer features superior thermal and chemical resistance.
Parts made from INFINAM® PEEK 9359F are of low flammability.

Appropriate application fields include aerospace, automotive and other industries. Using INFINAM® PEEK 9359F with FDM technology will benefit our customers, for example less material consumption, superior mechanical properties of printed parts, and more freedom of design.

Delivery of INFINAM® PEEK 9359F

INFINAM® PEEK 9359F has the nominal diameter of 1.75 mm (+/- 0.04 mm*) and fit for FDM/FFF printing.
It is supplied on spools with different volumes. The weight of 250 g, 500 g, 1 kg and 2 kg are available. Customer can choose the appropriate volume according to their parts or printing capacity.
The spools are packaged in vacuumed plastic bags to avoid moisture taken.
*Diameters are tested by a multi-axis laser gauge. The diameter is the average of these axis.

Drying recommendations

We recommend drying the filament prior to usage to avoid stringing, bubbles, or other defects.

1. Filament on spool: minimum 12 hours at 100 °C to 120 °C.
2. Filament removed from spool: minimum 4 hours at 130 °C to 140 °C.

The maximum drying temperature of the filament is 140 °C. Please also pay attention to the instruction of your drying device.

Statement on data listed

The properties listed apply to the VESTAKEEP® resin used in the manufacture of INFINAM® PEEK 9359F. The performance of any parts manufactured from INFINAM® PEEK 9359F are dominated by the printing or any other processing of the filament. Only Density and Filament Diameter apply to INFINAM® PEEK 9359F directly.

The values presented are typical or average values, they do not constitute a specification.

Key Features

Industrial Sector
Automotive and Mobility, Aircraft and Aerospace, Energy, Oil and Gas, 3D Printing

Resistance to
Heat (thermal stability), Fire / burn

EVONIK
Leading Beyond Chemistry

INFINAM®

Processing
3D Printing

Delivery form
(Mono)filament

Electrical
Insulating

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**3600**	MPa	ISO 527
Tensile strength	**90**	MPa	ISO 527
Yield stress	**90**	MPa	ISO 527
Yield strain	**5**	%	ISO 527
Stress at break	**70**	MPa	ISO 527
Nominal strain at break, tB	**5**	%	ISO 527
Charpy impact strength, +23°C	**N**	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	**N**	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, +23°C	**7**	kJ/m^2	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**6**	kJ/m^2	ISO 179/1eA
Type of failure	**C**	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	**340**	°C	ISO 11357-1/-3
Glass transition temperature, DSC	**152**	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**155**	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**205**	°C	ISO 75-1/-2
Melting Temperature	**340**	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	**1300**	kg/m^3	ISO 1183
Filament Diameter	**1.75**	mm	-

Density	**1300**	kg/m³	ASTM D 792

Burning Behav.	**dry**	**Unit**	**Test Standard**
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.6**	mm	-

Rheological properties	**dry**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**12**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-

Properties of 3D printed parts acc. ISO	**dry**	**Unit**	**Test Standard**
Charpy impact strength on-edge Y, 23°C	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength upright Z, 23°C	**N**	kJ/m²	ISO 179/1eU

Characteristics

Applications
Monofilament

Special Characteristics
Semi-crystalline, High heat resistant

Processing
Fused deposition molding, Additive manufacturing

Color
Natural color