

PEEK-OPTIMA™ LT1 FIL 1.75mm NAT

General Information

Product Description

High performance thermoplastic material, PolyEtherEtherKetone (PEEK), semi crystalline, filament for Additive Manufacture by filament fusion and other melt extrusion 3D printing processes. Colour natural/beige.

Typical Application Areas

Filament Fusion Additive Manufacture of printed parts. Suitable for use in the 3D printing of long-term implantable medical devices. Excellent sterilisation resistance. Product supplied vacuum packed and dry when produced. As PEEK is hygroscopic, drying before use is recommended. This product is based on PEEK-OPTIMA™ LT1.

Material Properties

Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	ISO 1183
Linear Density	3.13	g/m	Internal Method
Filament Diameter ¹	1.75	mm	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature (Onset)	145	°C	ISO 11357-2
Melting Temperature	340	°C	ISO 11357-3
Recrystallization Temperature (Peak)	294	°C	ISO 11357-3
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity 1000 s ⁻¹ (400°C)	440	Pa·s	Internal Method
Melt Stability 1000 s ⁻¹ , 1 hr (400°C)	1.0	%	Internal Method
Shear Viscosity 100 s ⁻¹ (400°C)	958	Pa·s	ISO 11443
Shear Viscosity 1000 sec ⁻¹ (400°C)	353	Pa·s	ISO 11443
Shear Viscosity 10000 sec ⁻¹ (400°C)	96.9	Pa·s	ISO 11443

Additional Information

- Nominal Weight: 0.5 kg
- Nominal Length: 161 m

Packaging

- Spool Dimensions: 200 mm diameter
- Spool Dimensions: 68 mm width
- Spool Material: Heat-resistant Polyamide

Typical Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	100	°C
Drying Time	8.0	hr
Suggested Max Moisture	0.020	%
Melt Temperature	340 to 450	°C

PEEK-OPTIMA™ LT1 FIL 1.75mm NAT

Extrusion Notes

Drying Temperature / Time: 100 °C / 8 hrs (residual moisture <0.02%)
Chamber / Build-Space Temperature: >150°C

Important Notes

- 1) Processing conditions quoted in our datasheets are typical of those used in our processing laboratories.
- 2) Data are generated in accordance with prevailing national, international and internal standards, and should be used for material comparison. Actual property values are highly dependent on part geometry and processing conditions.

Storage Requirements

Store in original packaging away from direct sunlight and extremes of temperatures. Do not use if sealing tab is broken prior to opening.

Development Material

During qualification activities NFHI (Not For Human Implantation) grades are available upon request.

Detailed data available on our website www.invibio.com or upon request.

Notes

- 1 3 axis laser micrometre

Revision Date: June 2026

This information is provided "as is". It is not intended to amount to advice. Use of the product is at the customer's/user's risk. It is the customer's/user's responsibility to thoroughly test the product in each specific application to determine its performance, efficacy and safety for each end-use product, device or other application and compliance with applicable laws, regulations and standards. Mention of a product is no guarantee of availability. Victrex reserves the right to modify products, data sheets, specifications and packaging. **Victrex makes no warranties, express or implied (including, without limitation, any warranty of fitness for a particular purpose or of intellectual property non-infringement) and will not be liable for any loss or damage of any nature (however arising) in connection with customer's/user's use or reliance on this information, except for any liability which cannot be excluded or limited by law.** This document may be modified or retracted at any time without notice to the customer/user.

Victrex Manufacturing Limited (or another member of the Victrex group) is the owner or the licensee of all intellectual property rights in and to this document including the following trade marks, VICTREX, INVIBIO, JUVORA, APTIV, 450G, PEEK-OPTIMA, SHAPING FUTURE PERFORMANCE, LMPAEK, TRIANGLE (Device). All rights are protected by intellectual property rights including copyright under relevant national and international intellectual property laws and treaties. All rights reserved. Copyright © Victrex Manufacturing Limited 2026.

Invibio Limited
Victrex Technology Centre, Hillhouse International, Thornton-Cleveleys, Lancashire, FY5 4QD, UK
Tel: +44 (0)1253 898 000 Fax: +44 (0)1253 898 001 Email: info@invibio.com
Registered in England and Wales No. 4088050 at address above
www.invibio.com