

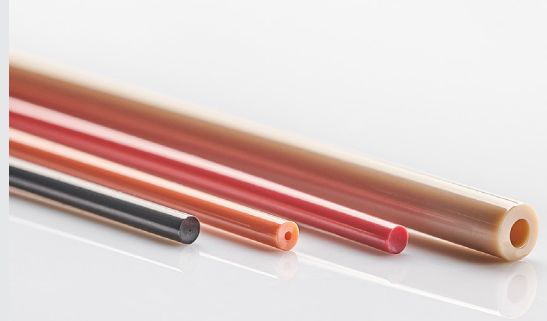
# Optinova PEEK Extrusions



## Solutions for Medical and Industrial Applications.

Optinova's PEEK is a PFAS-free thermoplastic known for its exceptional chemical resistance, low absorption rate, and excellent dimensional stability.

With outstanding heat tolerance, it maintains stiffness at high temperatures, making it ideal for demanding applications in challenging environments. PEEK can also be used as an alternative to some metals and is biocompatible.



## Key advantages

- **High Temperature and Chemical Resistance:** Withstands elevated temperatures and harsh chemicals for optimal performance
- **Excellent Mechanical Properties:** Strength and flexibility ensure long-lasting performance with resistance to high torque, wear, and burst pressure
- **Lightweight Alternative to Metals:** Provides a corrosion-resistant, lightweight option with top quality
- **Customization:** Choose from a wide dimensional range to optimize durability with flexibility, ensuring reliability in critical applications

## Applications

### Medical

- Intravascular delivery systems
- Electrophysiology catheters
- Orthopedic implants and devices
- Drug delivery systems

### Industrial

- Tubing for HPLC equipment
- Cable insulation for fiberoptics
- Insulation for wires in cables for aerospace or EV applications
- Monofilaments for 3D printing
- Chemical distribution systems with high pressure within pharmaceutical and aerospace
- Fuel and hydraulic lines in aerospace

## Technical specifications

Feature	PEEK Tubing	PEEK Mandrels & Monofilaments
ID	0.10-3.2 mm (0.004-0.126")	N/a
OD	0.40-6.35 mm (0.016-0.25")	0.40-3.40 mm (0.016-0.134")
Wall Thickness	0.038-1.59 mm (0.002-0.063")	N/a
Tolerances ID and OD	± 0.02-0.05 mm (± 0.001-0.002")	±0.05 mm (±0.002")
Tolerances Wall Thickness	± 0.02-0.05 mm (± 0.001-0.002")	
Colors Options	Natural (Beige-Brown), Black, Red, Orange, Yellow, Green, Blue, Violet, Grey	
Supply	PEEK tubing is supplied in coils, on spools, or in cut-to-length pieces	

Special material grades, additives, other sizes and tolerances, or complex tubing designs (stripes, dual layer, or multilumen) are available upon request if technically feasible. Prototyping cost may apply.

For more technical information, please contact us at our sales offices or visit our website: [optinova.com/contacts](https://www.optinova.com/contacts)

We meet **your specifications** by **customization** of processes and materials with **superb customer service**.

## Certifications



# We empower customers through highly reliable tubing solutions.



Properties	Test Method	Unit	Typical Value
<b>General</b>			
Continuous service temp	Maximum	°C	250
Chemical resistance			Exceptional
Density (crystalline)	ISO 1183	g/m <sup>3</sup>	1.3
<b>Electrical</b>			
Dielectric constant at 23°C, 50 Hz	IEC 60250		3.2
Dielectric constant at 200°C, 50 Hz			4.5
Dielectric strength, 2 mm thickness	IEC 60243-1	kV/mm	23
Dielectric strength, 50 µm thickness		kV/mm	190
Volume resistivity at 23°C	IEC 60093	Ohm • cm	1.0E <sup>16</sup>
Volume resistivity at 125°C			1.0E <sup>15</sup>
Volume resistivity at 175°C			1.0E <sup>9</sup>
<b>Environmental</b>			
Water absorption, saturation at 23°C	ISO 62	%	0.45
Water absorption, saturation at 100°C			0.55
<b>Mechanical</b>			
Tensile strength, yield at 23°C	ISO 527	Mpa	98
Tensile elongation, break at 23°C	ISO 527	%	25
Compressive strength at 23°C	ISO 604	Mpa	125
Compressive strength at 120°C			70
Flexural modulus at 23°C	ISO 178	Gpa	3.8
Tensile modulus at 23°C	ISO 527	Gpa	4
Hardness Shore D at 23°C	ISO 868		84
<b>Thermal</b>			
Melting point	ISO 11357	°C	340
Glass transition (T <sub>g</sub> )	ISO 11357	°C	143
Thermal conductivity at 23°C	ISO 22007-4	W/mK	0.29
Heat deflection, molded 1.8 MPa	ISO 75-f	°C	152
Heat deflection, annealed 200°C/4h			160

## About Us

Founded in 1971, Optinova is a world-leading extrusion partner for advanced medical and industrial tubing. With sales offices around the world and four extrusion plants in Finland, Thailand, and the US, we are serving partners from 50+ countries across industries.

## Contact Us

[www.optinova.com](http://www.optinova.com)  
[customerservice@optinova.com](mailto:customerservice@optinova.com)

