



THE TRUSTED LEADER IN MEDICAL GRADE THERMOPLASTICS



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SERVICES

ISO 13485 certified
QMS System

USP Class VI and ISO 10993
compliant materials

Complete material lot
and batch traceability

Standard and custom
certifications available
on all shipments

The highest quality measures
to ensure product compliance

Laser markable products

Worldwide shipping

Plastics play a crucial role in all areas of life sciences including orthopaedics, endoscopy, arthroscopy, cardiovascular, neurological, biomechanical, diagnostic and pharmaceutical, and are used in many types of medical devices and instruments, surgical trays and containers. Because of their unique properties, certain plastics are well suited for medical applications where safety and sterilization are imperative. Total Plastics Life Sciences is dedicated to providing quality materials that fit these criteria.

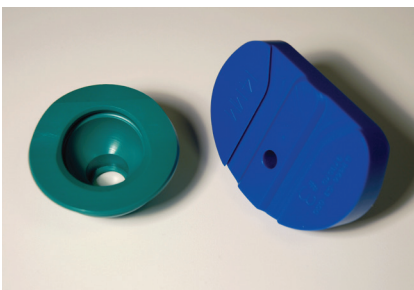
With our versatile inventory of medical grade plastics including sheet, rod, tubing and film, our knowledgeable staff is trained to assist with a variety of medical applications through all stages of the process. Total Plastics Life Sciences offers value-added services, such as cut-to-size and on-time delivery.

MEDICAL GRADE THERMOPLASTICS

POM-C: Acetal Copolymer | **UHMW-PE: Ultra High Molecular Weight Polyethylene**

PEEK: Polyetheretherketone | **HSPP: Heat Stabilized Polypropylene** | **PC: Polycarbonate**

PPSU: Polyphenylsulfone | **PSU: Polysulfone** | **PEI: Polyetherimide** | **Tubing**



PPSU POLYPHENYLSULFONE ROD AND PLATE

BENEFITS

- Resin meets the requirements of ISO 10993 specifications
- Lot controlled and traceable
- Excellent dimensional stability
- Stress relieved
- Outstanding impact resistance
- Withstands repeated autoclaving
- Laser markable and silkscreen printable

APPLICATIONS

- Provisional trials
- Instrument handles
- Impactor heads
- Various medical device components

PRODUCT

Standard rods available in diameters from 1/2" to 3 1/2", in bone white, black, blue, green, grey, and several other colors

A BaSO4 filled grade is also available

Standard plate in bone and black in 1/2", 3/4", 1", and custom thicknesses available

BRANDS

RADEL® R-5500

Sustason® PPSU MG

TECASON™ P MT



UHMW-PE ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE ROD AND PLATE

BENEFITS

- Excellent wear resistance
- Lot controlled and traceable
- Extremely high notched impact strength
- Compliant with ASTM F-648 and ISO 5834 standard specifications
- Very good sliding quality and low friction loss values
- Outstanding low temperature properties
- High energy absorption at high stress rates
- Excellent chemical resistance
- High resistance to stress cracking
- Very good noise reduction
- Negligible water absorption
- Biocompatible and lightweight (0.930g/cm³)

APPLICATIONS

- Orthopedic surgical implants as articulating surfaces for total joint arthroplasties
- Various instruments, devices and components for orthopedic and general surgery
- Dental implant healing caps
- Bone cement restrictors
- Additional devices designated as long term
- Human implants

PRODUCT

Available in GUR® 1020 (Type I) and GUR® 1050 (Type II) surgical grades

Crosslinked and Vitamin E Grades available

Standard rods available in various diameters (inch and millimeters)

Supplied as natural, rectangular bar and sheet are available, please contact us for information regarding crosslinking and anti-oxidants

BRANDS

GUR®
Lennite®



PEEK POLYETHERETHERKETONE ROD AND PLATE

CARBON-FILLED

The combination of PEEK polymer and various degrees of carbon fiber produce a material that is lightweight and high in stiffness and strength. Although the thirty percent filled product is the most common, there has been an increase in the higher percentages that include continuous long fiber and woven fiber that can account for fifty or sixty percent of the product's mass. Our technical support personnel can assist with selection of the proper material to fit your needs.

BENEFITS

- Excellent rigidity and compressive strength
- Lot controlled and traceable
- Very good chemical resistance
- Superior dimensional stability
- Optimum wear resistance and load carrying capability
- Excellent creep resistance
- Good machinability
- Radiolucent
- Excellent rigidity
- ISO 10993 and USP Class VI compliant
- Human body contact up to 24 hours
- Low expansion rate

APPLICATIONS

- Fixator equipment
- Targeting guides
- Retractor blades
- Minimal invasive devices
- Bearing surfaces
- Isolating parts

PRODUCT

Custom ordered rods available in various diameters

Custom ordered sheets available in various thicknesses, carbon-filled percentage at 30% for chopped and random fibers

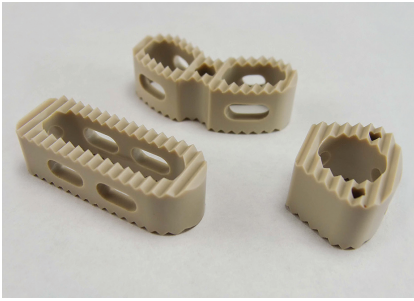
Woven and long continuous fibers are available in higher percentages

BRANDS

TECAPEEK™ CF30/XP98
(PEEK 30% carbon-filled)

Ketron® PEEK-CA30 LSG
TECATEC™





PEEK POLYETHERETHERKETONE ROD INTENDED FOR **LONG-TERM** IMPLANTS

LONG-TERM

This polymer has become one of the most widely used in devices intended for long term implant in the spine due to its unique characteristics. The proximity to the density of human bone, the overall compressive strength, and the ability to take on a variety of shapes have given PEEK a primary position in the market. Our team of experts can help you determine the best possible solutions using this material, and we can even assist with your 510k submission. Let us show you how worldwide leaders in manufacturing and supply chain management can make a difference in your device from concept and design to the hands of a surgeon.

BENEFITS

- Tested for biocompatibility under ISO classifications
- Lot controlled and traceable
- Compliant with standard specification ASTM F2026
- Radiolucent in x-ray techniques (unfilled grades)
- Excellent dimensional stability
- Superior chemical resistance
- Low moisture absorption
- High heat resistance and thermal stability
- Low tendency to form stress cracks

APPLICATIONS

- Spinal interbody fusion cages and spacers
- Various long term human implantable devices

PRODUCT

Standard rods available in various diameters, supplied as natural, please contact us for information regarding profile extrusions and filled grades

BRANDS

VertePEEK™

PEEK POLYETHERETHERKETONE ROD INTENDED FOR **SHORT-TERM** IMPLANTS

SHORT-TERM

In accordance with the biocompatible test standards under ISO 10993, this polymer is available in all three phases of contact with the human body. It is important to note that individual device testing may be required for an FDA submission, but PEEK has been proven to be an excellent choice for components and devices in the healthcare markets.



HUMAN BODY CONTACT UP TO 30 DAYS

BENEFITS

- Extremely good chemical resistance
- Lot controlled and traceable
- Biocompatible
- Excellent mechanical and thermal properties
- Superior dimensional stability
- Good abrasion resistance
- High impact strength
- ISO 10993 and USP Class VI compliant
- Extreme resistance to hydrolysis

PRODUCT

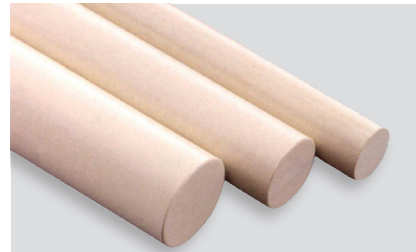
Standard rods available in various diameters, supplied as natural

BRANDS

TECAPEEK™ CLASSIX
Ketron® LSG
PEEK-CLASSIX™

APPLICATIONS

- Dental implant healing caps
- Temporary abutments
- Endoscopic equipment
- Short-term implants
- X-ray and MRI devices
- Catheters, Medication dosing systems
- Laparoscopes, Surgical instruments
- Measurement probes, dialysis equipment



HUMAN BODY CONTACT UP TO 24 HOURS

BENEFITS

- Excellent mechanical, thermal and chemical resistant properties
- Lot controlled and traceable
- Very good stress crack resistance
- Biocompatible for instrumentation
- Good sliding properties
- High resistance to gamma radiation
- Excellent machinability
- ISO 10993 and USP Class VI compliant
- Creep and wear resistant

PRODUCT

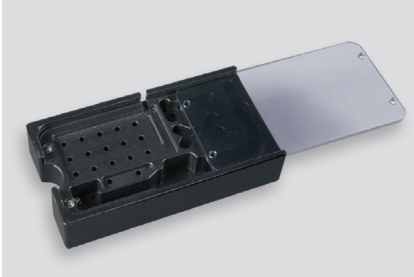
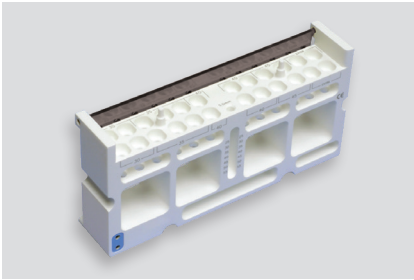
Standard rods available in various diameters; supplied as natural; colors are available in red, yellow, blue, green and black; a glass-filled grade is also available

BRANDS

TECAPEEK™
TECAPEEK™ MT
Ketron® PEEK LSG
SustaPEEK® MG

APPLICATIONS

- Repeated use surgical instruments
- Sterilization containers
- Dental equipment
- Pharmaceutical tablet production,
- Bioreactors
- Instrument holders
- Chromatography components, nozzles, adapters



HSPP HEAT STABILIZED POLYPROPYLENE PLATE

BENEFITS

- Excellent chemical resistance
- Laser markable
- Superior dimensional stability
- Lightweight
- Temperature resistant for steam sterilization
- Lot controlled and traceable
- ISO 10993 and USP Class VI compliant
- Low moisture absorption
- Good machinability

APPLICATIONS

- Sterilization containers
- Surgical trays
- Sterilization tray components
- Cranio-maxillofacial trays

PRODUCT

Standard sheet thicknesses from 1/2" to 2 1/2," available in white and black, additional colors and thicknesses
Available as a custom order

BRANDS

Propylux® HS2
TOTALPRO™ HSP
TECAPRO™ MT



HSPP HEAT STABILIZED POLYPROPYLENE ROD

BENEFITS

- Excellent chemical resistance
- Lot controlled and traceable
- Laser markable
- Superior dimensional stability
- Lightweight
- Steam autoclavable heat stabilized for improved temperature performance
- ISO 10993 and USP Class VI compliant
- Low moisture absorption
- Good machinability

APPLICATIONS

- Provisional trials
- Instrument handles
- Various components and medical devices

PRODUCT

Standard rods available in diameters from 1/2" to 3 1/2"

Available colors in dark blue, dark green, yellow, red, brown, black, grey, white, orange, magenta, light blue, aqua blue, neon green, violet and rust
Additional colors and diameters
Available as a custom order

BRANDS

Propylux® HS



PC POLYCARBONATE ROD

BENEFITS

- Excellent impact and toughness properties
- Lot controlled and traceable
- Good electrical insulation
- Easy to machine, weld, and bond
- Superior transparency
- Good heat deformation resistance
- Excellent gamma radiation resistance
- USP Class VI compliant resin

APPLICATIONS

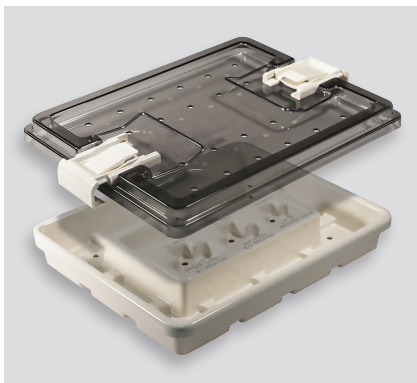
- Surgical equipment, housings, and covers
- Instrument components
- Disposable medical devices

PRODUCT

Standard rods available in various diameters
Supplied as transparent with a bluish tint

BRANDS

Zelux® GS
TECANAT™ PC MT
LEXAN™ HPS6



PPSU POLYPHENYLSULFONE SHEET

For sterilization cases and trays, PPSU has the most desirable properties of any polymer. Whether you are thermoforming or machining, this material is easy to work and takes repeated steam autoclave cycles with little or no loss of physical properties. Ask about our cut-to-size and order-to-size capabilities to fit your needs.

BENEFITS

- Resin meets the requirements of ISO 10993 specifications
- Lot controlled and traceable
- Excellent dimensional stability
- Outstanding impact resistance
- Withstands repeated autoclaving
- Laser markable and silkscreen printable
- Good visibility through transparent material

APPLICATIONS

- Thermoformed lids and bases for sterilization container systems
- Slide type lids for cassette style machined trays
- Various tray and lid components

PRODUCT

Standard sheet thicknesses in transparent gray (CL301 formulation) of .095" and .125," other transparent colors and thicknesses are available

Opaque thicknesses and colors are also available as a custom order

BRANDS

RADEL® R-5000 Series



POM-C ACETAL COPOLYMER / POLYOXYMETHYLENE ROD AND PLATE

BENEFITS

- Good strength and rigidity
- Lot controlled and traceable
- Good sliding properties
- Laser markable
- Heat resistant
- Good electrical insulation
- Easily welded and machined
- Stress relieved
- Resin meets the requirements of USP Class VI specifications

APPLICATIONS

- Provisional trials
- Instrument handles,
- Medical device components

PRODUCT

Available in a variety of colors for 1" to 3 1/2" diameter rod, and 1/2" to 2" thick plate as a custom order

BRANDS

Hostaform® MT®2U06



PSU POLYSULFONE ROD AND PLATE

BENEFITS

- High chemical resistance
- Lot controlled and traceable
- Good radiation stability
- Low ionic impurity levels
- Hydrolysis resistant
- Semi-transparent
- Excellent mechanical and electrical properties
- Heat resistant

APPLICATIONS

- Medical devices
- Analytical instrumentation

PRODUCT

Standard rod and plate available in various sizes

Supplied as natural

BRANDS

TECASON™ S
Udel®



PEI **POLYETHERIMIDE** ROD

BENEFITS

- Inherent flame resistance
- Lot controlled and traceable
- Good steam autoclave performance
- Superior limiting oxygen index
- Exception tensile and flexural strength
- Broad chemical resistance
- ISO 10993 and USP Class VI compliant resin

APPLICATIONS

- Provisional trials
- Instrument handles,
- Medical device components

PRODUCT

Standard rods in diameters 1" to 3"
Available in black
Call for availability of additional colors and diameters

BRANDS

ULTEM®
Tempalux®
TECAPEI™ MT
SustaPEI MG



TUBING **TYGON® 2275 HIGH PURITY TUBING**

BENEFITS

- Provides an uncompromising fluid path for sensitive solutions
- Low absorption maintains fluid integrity
- Plasticizer-free (virtually no extractables)
- Environmentally friendly (safely disposed through incineration)
- Documented biocompatibility to the ISO 10993 standard
- Meets USP Class VI, FDA and NSF criteria

APPLICATIONS

- Sterile filling and dispensing systems, diagnostic equipment, nuclear equipment, laboratory analytical instrumentation
- Infusion sets for parenterals and drugs, cosmetic production, food and beverage processing, cell and tissue culture transport



TUBING **TYGON® S-50-HL TUBING**

BENEFITS

- Ideal for contact with blood
- Flexible and resilient with established performance in peristaltic pump applications
- Fully characterized to ISO 10993 and FDA guidelines for biocompatibility
- Meets USP Class VI criteria

APPLICATIONS

- Tubing for chemotherapy, dialysis, minimally invasive surgery



TUBING **PHARMED® BPT TUBING**

BENEFITS

- Excellent flexibility
- Outlasts silicone tubing in peristaltic pumps by up to 30 times
- Can be autoclaved repeatedly
- Heat weldable for sterile access in closed systems
- Documented biocompatibility to the ISO 10993 standard
- Meets USP Class VI, FDA and NSF criteria

APPLICATIONS

- Peristaltic pumps and cell culture
- Transparent working models, insulators, plug strips, masking covers, photo covers, housing parts, plugs, sight glasses, optical components, weather protection parts



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