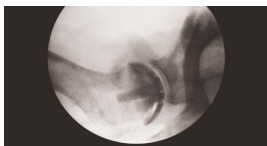


MEDICAL TECHNOLOGY MATERIALS



TECASON™ P XRO: This is a PPSU product with a radio opacifer. Better visibility provides the surgeon a clearer interpretation of the fit of orthopedic sizing trials particularly in minimally invasive procedures. Radio opacity also provides a safety feature in locating a plastic component during a surgical procedure. This product has been tested by NAMSA and meets USP Class VI requirements. TECASON™ P XRO has also been tested to ISO 10993 for medical devices intended for less than 24 hours body contact.



TECAPEEK™ MT: Colored rod produced from VICTREX® PEEK™ 450 resin. Current colors available are yellow, green, blue and black. All pigments are organic based and are FDA compliant. TECAPEEK™ MT is tested to USP Class VI on an annual audit basis and is intended for medical instrumentation and orthopedic sizing trials. Most colors are stocked domestically in 12 and 25 mm rod. Other rod diameters are available on a custom production basis with a minimum volume of 80 lbs per rod diameter.



TECAPEEK™ CLASSIX: This stock shape is produced from INVIBIO® PEEK™ CLASSIX BC1. The color is an off-white and is designed and supported with biocompatibility testing for applications that require longer exposure to blood and tissue, up to 30 days. Domestic stock of 6, 8, 10, 20, 30 and 45 mm rod is available for immediate shipment. Other rod diameters are available on a custom production basis with a minimum volume of 80 lbs per rod diameter.



TECAPEEK™ XP98 AND MT CF30: Both grades are reinforced with 30% carbon fiber and differentiated by their processing methods. TECAPEEK™ XP98 is compression molded and TECAPEEK™ MT CF30 is extruded. Plastics as well as carbon fiber are radiolucent which make these materials ideal for the higher modulus requirement of target devices for internal fixation bone trauma nails and plates. Both materials are offered in standard shapes.



TECANYL™ MT: A new family of autoclavable materials was developed for medical device applications. This material offers the desired performance properties of PPSU based resins without the black spec contamination often found in sulfone polymers. In addition, TECANYL™ MT is much easier to machine and exhibits significantly less wear on tooling than do parts machined from Radel and typical PPSU based resins. This allows part designers to take advantage of lower manufacturing costs without sacrificing part performance. TECANYL™ MT is available in colors, carbon reinforced, radiolucent and radio opaque grades.



SAN: This suffix indicates a new line of antimicrobial shapes offered by Plastics International utilizing silver as the active ingredient. The silver system used in our products have proven efficacy against bacteria. TECAFORM™ AH SAN (Copolymer Acetal) and TECAPRO™ SAN (Polypropylene) are currently available from stock in plate thickness from 0.5" to 4.0". Plastics International is also introducing a filled PTFE product in the SAN family for sanitary seals and gaskets.

TECAFORM™ AH SAN and TECAPRO™ SAN Safety for Medical Technology

Polyacetal TECAFORM™ AH SAN and Polypropylene TECAPRO™ SAN charged with an antimicrobial additive provide additional safety in medical technology. The antimicrobial effect is achieved by a gradual release of silver ions that create the following advantages:

- Reduced bacterial contamination during downtimes (higher rate of cleanliness)
- Reduced formation of odor and biofilm on material surface
- Reduced formation of bacteria in critical points of the equipment
- Back-up in case of inadequate cleaning (additional safety for end user)
- Reduced discoloration/corrosion caused by microbes (improved optical characteristics)
- Homogeneous distribution of active component on material surface
- No migration of the active component (additional safety for end user)
- No toxicity of the active component, no toxic decomposition products (harmless to humans)
- Cleaning or minor abrasion of the surface will continuously renew the antimicrobial effect
- No thermal damage in the usual application temperature range
- FDA conformity of raw material, color pigments and the antimicrobial additive

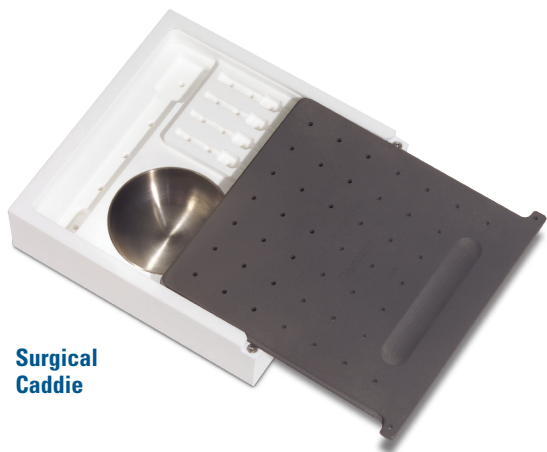
Applications

- Handles for surgical instruments
- Surgical trays

Special Applications for TECAPRO™ SAN

- Surgical trays (for sterilization and storage)




**Surgical
Caddie**

**Surgical
Caddie**
**TECAPRO™ MT is Dimensionally Stable and Light Weight,
Resistant to Chemicals with Stable Color.**

Sterilization containers, as an example, for surgical instruments have to provide high dimensional stability, especially throughout repeated sterilization cycles. Due to a special stabilization process, TECAPRO™ MT shows a better resistance to higher temperatures than standard polypropylene. Compared to other materials (stainless steel and PTFE for example) TECAPRO™ MT possesses a much lower density which results in a reduced weight of the component parts. The standard color is white, however, other colors can be produced according to customer preferences.

TECAPRO™ MT is available as TECAPRO™ SAN with an antimicrobial additive to provide additional safety.

Very stable after exposure to chemicals.
Properties

- Good resistance to cleaning agents and disinfectants
- Can be repeatedly sterilized with hot steam
- High dimensional stability
- Good machinability
- Laser marking possible
- FDA conformity of raw material and color pigments

Preferred Field

- Medical technology

Applications

- Surgical trays, surgical related equipment, implant trials

STERILIZATION TECHNIQUES

MATERIAL	RADIATION	AUTOCLAVE (STEAM)	ETO (ETHYLENE OXIDE GAS)
PEEK™	Excellent	Excellent	Excellent
TECASON™ P (Radel® R)	Excellent	Excellent	Excellent
TECAPRO™ MT	Poor	Excellent	Excellent
TECANYL™ MT	Excellent	Excellent	Excellent
ULTEM® 1000	Excellent	Good	Excellent
POLYSULFONE	Excellent	Fair	Excellent
HYDEX® 4101	Good	Poor	Excellent
ACETAL	Poor	Fair	Excellent
ACRYLIC	Poor	Poor	Good

The above table serves as an indication of sterilizable compatibility. Final applications must be tested on an individual basis.