

High Performance Polymer Solutions for Today's Medical Industry

Today's healthcare applications require new polymer solutions to perform well with respect to stringent hospital processes and cleaning reagents, device mobility, and design innovation. Conventus Polymers offers a broad portfolio of semi-crystalline and amorphous resins from world-leading producers that offer regulatory compliance (e.g.: ISO 10993, USP VI, and UL), supply surety, custom color compounds, low minimum order quantities, and global support. Why choose Conventus for your next healthcare project? As a technical compounder and distributor of polymers, our priority and focus is on helping you find the right solution for your application.

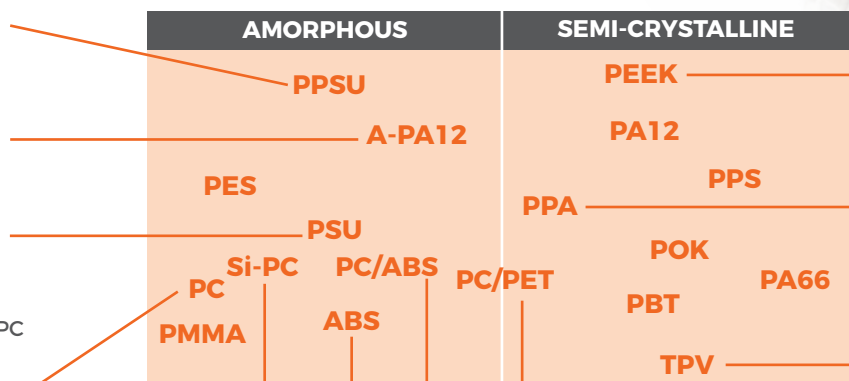


ISO 10993
EtO/Y resistant
Autoclavable (1,000 cycles)
High impact
Clear and colorable
E-beam

Clear nylon
New autoclave grade
High heat
Silicone overmoldable

ISO 10993
EtO/Y resistant
Autoclavable (100 cycles)
Clear and colorable
Much higher chemical and heat resistance over PC

ISO 10993
EtO/Y
Steam sterilization (1-2 cycle)
High impact
Clear
UL94 V-2 and UL94 V-0



PC with improved impact and chemical resistance
UL94 V-0

Clear ABS
BPA-free

ISO 10993
High flow (thin wall)
UL94 V-0 @ 1.5mm
Color fastness

Excellent balance of impact and chemical resistance
UL94 V-0

ISO 10993
EtO/Y resistant
Autoclavable
Offered unfilled or with fillers for extremely high strength and stiffness

ISO 10993
EtO/Y resistant
Offered with 30-70% GF or CF for very high strength and stiffness

ISO 10993
Broad range of hardness: 30 Shore A - 50 Shore D
Low compression set
Lightweight

MEDICAL ELECTRONIC DEVICE ENCLOSURES

Applications: Patient monitoring, blood pressure machine, thermometry, automated external defibrillator

Requirements: Good chemical resistance to common healthcare cleaners, excellent impact, dimensional stability, UL94 V-0 or V-2, color fastness



Example Solutions:

EMERGE PC/ABS 7590

- ▶ ISO 10993
- ▶ UL94 V-0 @ 1.5mm
- ▶ High flow

EMERGE PC/PET 9500CR

- ▶ ISO 10993
- ▶ UL94 V-0 @ 1.5mm
- ▶ Improved chemical resistance over PC/ABS
- ▶ Shrinkage: 0.005 - 0.009in/in

TRIRES SO4-3025UNI

- ▶ Excellent low temperature impact at -60°C (-76°F) PC
- ▶ Improved chemical resistance
- ▶ UL94 V-0 @ 1.5mm

RESPIRATORY & SLEEP THERAPY

Applications: Respirators, ventilators, humidifiers, oxygen concentrators, masks

Requirements: Biocompatibility, sterilizable (EtO, Y, steam), impact and chemical resistance, UL94, silicone overmolding capability



Example Solutions:

CALIBRE PC 2061

- ▶ ISO 10993
- ▶ UL94 V-2 @ 0.75mm
- ▶ Clear and colorable
- ▶ High impact

EMERGE PC/ABS 7700

- ▶ ISO 10993
- ▶ UL94 V-0 @ 1.5mm
- ▶ Colorable
- ▶ Excellent surface appearance

GRILAMID TR60 Amorphous Nylon

- ▶ High heat
- ▶ Silicone bonding compatible
- ▶ Clear/colorable
- ▶ Excellent chemical resistance
- ▶ Steam sterilizable (10 cycles)
- ▶ BPA-free

SURGICAL INSTRUMENTS

Applications: Trocars, retractors, staplers, forceps, endoscopy tools

Requirements: Biocompatibility, high strength and stiffness, ductility and toughness, sterilizable, metal replacement



Example Solutions:

GRIVORY GV5H

- ▶ 50% GF PPA/PA66
- ▶ ISO 10993
- ▶ High strength and stiffness
- ▶ Excellent dimensional stability

DURAPEEK 1000FC30

- ▶ 30% CF PEEK
- ▶ Autoclavable (1,000 cycles)
- ▶ Mechanical characteristics comparable to bone
- ▶ Extremely high strength and stiffness

SIVERAS L304G35H

- ▶ 30% GF LCP
- ▶ Exceptional strength and stiffness
- ▶ Very high flow
- ▶ H₂O₂ vapor and gas plasma sterilization compatible

DRUG DELIVERY/WEARABLES

Applications: Inhalers, insulin delivery, smart watches

Requirements: Biocompatibility, custom coloring, impact/wear, weight



Example Solutions:

DURA-STAT ABS1000

- ▶ Surface resistivity of 1x10¹¹ ohm/sq
- ▶ Clear
- ▶ Charge neutral material for optimal dosage delivery in aerosol

GRILAMID TR55 Amorphous Nylon

- ▶ ISO 10993/DMF/USP V1
- ▶ Sterilizable
- ▶ Lightweight
- ▶ BPA-free

PLASLUBE PC-02000

- ▶ Lubricated polycarbonate
- ▶ PTFE and silicone-free
- ▶ Good impact and colorable
- ▶ Great for reducing friction and noise in moving parts

MEDICAL TRAYS & ANIMAL CAGES

Applications: Orthopedic trays, biocontainment

Requirements: Clear, custom color, steam autoclave, high impact



Example Solutions:

DURASON PSU 1000HF

- ▶ 100 cycle autoclave @ 134°C (273°F)
- ▶ Good flow and moderate impact
- ▶ Excellent chemical resistance

DURASON PPSU 1000HF

- ▶ 1,000 cycle autoclave @ 134°C (273°F)
- ▶ Very high impact
- ▶ Very high flow

GRILAMID TR FE11292 PA12

- ▶ 500 cycle autoclave @ 134°C (273°F)
- ▶ Low weight/density
- ▶ Superior impact properties to PSU
- ▶ Clear and custom colorable
- ▶ Silicone overmolding capable
- ▶ Excellent chemical resistance

MEDICAL LIGHTING

Applications: Housing, reflectors, handles and covers

Requirements: Clear, custom color, steam autoclave, high impact

Example Solutions:

GRILAMID XE 3958

Amorphous Nylon

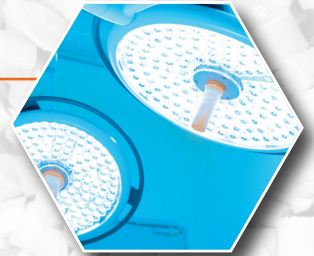
- ▶ Heat deflection temperature 135°C (275°F)
- ▶ Impact resistant
- ▶ 94% light transmission
- ▶ Density: 1.04g/cm³
- ▶ UL94 V-0 @ 1.5mm
- ▶ Low haze

DURATOUGH PC XR2289

- ▶ 97.4% reflectivity
- ▶ Metallization replacement

XAREC SPS EA537

- ▶ 260°C (500°F) heat deflection temperature
- ▶ Low warp for semi-crystalline
- ▶ Low cost heat resistance
- ▶ UL94 V-0 @ 0.8mm



ORTHOPEDICS

Applications: Knee trials, external bone fixation devices, cases

Requirements: Biocompatibility, custom coloring, impact/wear

Example Solutions:

PARYLS F1350 PPSU

- ▶ ISO 10993
- ▶ Repeated autoclave (1,000 cycles)
- ▶ Full custom color portfolio
- ▶ High impact

DURAPEEK 1000HF

- ▶ High strength
- ▶ Fully custom color portfolio

GRILAMID TR XE 11078

- ▶ 20% GF TR
- ▶ 92% light transmission/87% clarity
- ▶ Great balance of strength and impact



BLOOD CARE

Applications: Blood oxygenators, blood collection, filters, membranes

Requirements: Biocompatibility, clarity, EtO, Y, e-beam, autoclave, performance over broad pH range

Example Solutions:

PARYLS F3050M Polysulfone

- ▶ ISO 10993
- ▶ FDA/NSF compliant
- ▶ Narrow molecular weight for fibers distribution

CALIBRE 2061 Polycarbonate

- ▶ ISO 10993
- ▶ FDA compliant
- ▶ Custom colorable
- ▶ High impact

PARYLS F3150 Polysulfone

- ▶ Filter housing
- ▶ Extrudable
- ▶ Custom colorable
- ▶ FDA/NSF compliant
- ▶ Heat deflection temperature of 174°C (345°F)
- ▶ Excellent hydrolytic stability



For More Information

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