



Product Selection Guide

# FORMERRA HEALTHCARE SOLUTIONS

Medical Equipment



# Medical Equipment

Medical equipment and devices must meet industry standards, maintaining performance and functionality despite frequent and rigorous disinfection with harsh chemicals and cleaners, exposure to ultraviolet rays and impact during use. As a medical equipment and device manufacturer, your high-performance, ergonomically designed equipment requires robust materials with high resistance to chemicals, UV rays and impact.

Formerra can help you solve your toughest application challenges by providing a specialized approach to the latest material, colorant and additive technologies. With a dedication to sustainable solutions, technical and logistics expertise and innovative design engineering capabilities, we can help you mitigate risk, optimize design, and accelerate product commercialization.



## Our Suppliers

You face a unique set of challenges when designing parts for the healthcare industry. In addition to maintaining an effective manufacturing and supply chain operation, you're challenged with designing products that must meet strict regulatory and quality assurance standards. At Formerra, we help you achieve these goals with our comprehensive portfolio of leading suppliers, on-time delivery and a host of services focused on helping you succeed.



# Rigid Components

Diagnostic, Imaging, Life Support, Laboratory, & Monitoring Equipment

## Applications include:

- Housings
- Covers
- Monitor bezels
- Body panels
- Handles
- Access panels
- Battery enclosures
- Wands
- Coils

## Rigid Component Solution Needs:

- Materials compliant with ISO 10993 & USP Class VI, if required
- UL approved resins to meet flammability requirements
- Housings with toughness & good impact resistance
- Enclosures & components that withstand repeated cleanings
- High-flow materials for components with complex designs

## Copolyester, Polyester & PC/Polyester Blends

Copolyester	Eastman Tritan™ (Copolyester)	High chemical resistance to a wide variety of hospital disinfectants; excellent toughness and impact resistance after disinfection; retains color and gloss after sterilization and disinfection; does not contain BPA, BPS or halogens
Polybutylene Terephthalate (PBT)	Celanese Crastin® & Rynite® (FR-PBT)	30% glass reinforced; flame retardant; good mold flow and electrical properties; high strength, stiffness, dimensional stability and heat resistance
Polycarbonate/Polyester (PC/PET) & Polycarbonate/Polybutylene Terephthalate (PC/PBT)	Covestro Makroblend® (FR-PC/PET) & (FR-PC/PBT)	Strength; toughness; chemical resistance; flame retardant
	Covestro Makroblend® (Non-FR PC/PBT)	Strength; toughness; chemical resistance; limited biocompatibility
	Trinseo EMERGE™ (FR-PC/PET)	Chemical resistance; ignition resistance; limited biocompatibility

## PA, PVC, PC & PMMA

Polyamide (Nylon, PA)	Avient Trilliant™ XR Radiation Shielding (PA)	Radiation shielding; green alternative for lead replacement; enhanced design freedom vs. lead; available in hard and soft durometers
Polyvinyl Chloride (PVC)	GEON Performance Solutions Resilience™ HC (PVC)	Excellent chemical resistance; good strength and stiffness; very good surface quality; inherently flame resistant; available in all medical colors; excellent solvent bonding to PVC
Polycarbonate (PC)	Covestro Makrolon® (PC)	Flame retardant; impact resistant; transparent and opaque; glass-filled grades also available
PolyMethyl Methacrylate (PMMA)	Trinseo Plexiglas® Acrylics (PMMA)	Clarity; easy processing; chemical resistance; BPA free; ideal for light piping and lenses

## Styrenics & FR-PC/ABS Blends

Styrenics	Trinseo MAGNUM™ (ABS)	Opaque; custom colors; excellent impact and flow; low residuals; full biocompatibility
	INEOS Styrolution Terlux® HD (MABS)	Good clarity; good heat and overall chemical resistance; good impact strength; good solvent bonding to PVC; outstanding surface quality
	INEOS Styrolution Lustran® & Novodur® HD (ABS)	Opaque appearance; outstanding chemical resistance; high impact strength; excellent balance of properties; ease of processability; bondable
FR-Polycarbonate/ ABS (FR-PC/ABS)	Covestro Bayblend® (FR-PC/ABS)	Flame retardant; good impact resistance; dimensional stability; toughness
	Trinseo EMERGE™ (FR-PC/ABS)	Ignition resistant; limited biocompatibility; high flow; easy processing; glass-filled also available

# Flexible Components

Diagnostic, Imaging, Life Support, Laboratory, & Monitoring Equipment

## Applications include:

- O-rings
- Gaskets
- Wheels
- Soft touch grips/handles
- Keypads/displays
- Diaphragms
- Seals

## Flexible Component Solution Needs:

- Comfortable handles & grips
- Water-tight seals
- Durable feet or casters
- Durable keypads
- Flow control

## TPE, TPC-ET, TPU, TPV & Flexible PVC

Thermoplastic Elastomers (TPE)	Avient Versaflex™ HC Overmolding Series (TPE)	Proven healthcare solutions with hardness ranges 42–65 Shore A; autoclave, radiation and EtO sterilizable; bondable to many substrates; customizable haptics
Thermoplastic Polyester Elastomers (TPC-ET)	Celanese Hytrel® (TPC-ET)	Wide range of flexibility, stiffness, and processing options; Shore D between 30–82; BPA-free; excellent flex fatigue and toughness; low temperature flexibility; good chemical resistance
Thermoplastic Polyurethane (TPU)	Covestro Texin® (TPU)	Biocompatible; soft touch; sterilizable; good chemical resistance; overmold for grips and handles; excellent bonding to polar substrates like PC; 70A to 95A
Thermoplastic Vulcanizate (TPV)	Avient Versalloy™ (TPV)	Proven healthcare solutions with hardness ranges 45–90 Shore A; autoclave, radiation and EtO sterilizable; natural and colorable; smooth texture; bonds to PP
	Celanese Santoprene™ (TPV)	Durable sealing performance; elastic recovery; excellent chemical resistance; compliance with medical standards
Flexible Polyvinyl Chloride (PVC)	GEON Performance Solutions Geon™ Flexible PVC	Engineered exclusively for the healthcare market; transparent and opaque colors; radiopaque grades available; durometer ranges from 55A to 40D; gamma and EtO sterilizable

## Thermoset Silicone Elastomers

Polyamide (Nylon, PA)	Avient Trilliant™ XR Radiation Shielding (PA)	Radiation shielding; green alternative for lead replacement; enhanced design freedom vs. lead; available in hard and soft durometers
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# Wire & Cable

Diagnostic, Imaging, Life Support, Laboratory, & Monitoring Equipment

## Applications include:

- Plug molding
- Flexible jacket
- Heater cable insulation
- Flexible cords
- Coil cords & cable

## Wire & Cable Component Solution Needs:

- Materials compliant with UL, RoHS, REACH & WEEE, if needed
- Materials with good chemical, moisture & abrasion resistance
- Low smoke & non-halogen materials

### PVC

Polyvinyl Chloride (fPVC)

GEON Performance Solutions  
Geon™ Flexible PVC

Inherent flame resistance; halogen-free; excellent chemical resistance; non-yellowing; proven safety record in wire and cable applications; high temperature grades available

### TPE, TPC-ET, TPU & POE

Thermoplastic Polyester Elastomers (TPC-ET)

Celanese Hytrel®  
(TPC-ET)

REACH, RoHS and WEEE compliant; wide range of flexibility, stiffness, and processing options; 30D-82D; BPA-free; excellent flex fatigue and toughness; low temperature flexibility; good chemical resistance

Thermoplastic Polyurethane (TPU)

Covestro Texin®  
(TPU)

RoHS, WEEE, and REACH compliant; excellent memory and recoil; abrasion resistance; Texin® Rx Series - medical grade Polyether TPU – 70A to 80D

Polyolefin Elastomer (POE)

Avient ECCOH™

Non-halogenated flame retardant; high flexibility; environmental stress cracking resistance (ESCR); good electrical properties



Your medical equipment needs to be durable and properly perform every time. With the right polymers, your equipment will not only resist cracking, but can also bring greater comfort to both the patient and the physician.

- Housings
- Covers
- Panels
- Enclosures
- Handles
- Wands
- Coils
- O-rings
- Gaskets
- Wheels
- Soft-Touch Components
- Keypad Displays

Convenience  
•  
Enhanced Visibility  
•  
24/7 Access

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