

SELECTION GUIDE

# FORMERRA HEALTHCARE SOLUTIONS

Labware &  
Point-of-Care  
Diagnostics



MORE THAN  
MATERIALS





## LABWARE & POINT-OF-CARE

As healthcare trends shift from reactive treatment to proactive prevention, and diagnostic tests aid healthcare professionals and patients in accessing test results more frequently than ever before, it is critical labware and diagnostics perform with reliable predictability.

At Formerra, we 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.

## RIGID COMPONENTS: BIOTECH/LIFE SCIENCES, CHEMICAL, CLINICAL, ENVIRONMENTAL, FOOD & MATERIALS TESTING

### Applications include:

- Flasks
- Bottles
- Pipettes
- Trays
- Vials
- Lids
- Collection cups
- Beakers
- Test tubes
- Funnels
- Diagnostic Kits

### Rigid Component Solution Needs:

- Materials compliant with ISO 10993 & USP Class VI, if required
- Shatterproof & chip-resistant materials
- Low cost disposables
- Security of supply
- Chemical resistance
- Transparency
- Materials that can withstand wide temperature variations

### Copolyester, Rigid TPU, PVC & PVC Blends

Copolyester	Eastman Eastar™, Durastar™ & Tritan™ (Copolyester)	Thick- and thin-walled applications with glass-like appearance; improved toughness and reduced weight; chemical resistance to drugs, solvents, lipids, and disinfectants; preserves clarity and exhibits almost no color shift after sterilization
Rigid Thermoplastic Polyurethane (TPU)	Covestro Texin® (TPU)	Biocompatible; sterilizable; excellent chemical resistance; bondable to polar substrates like PC; rigid 65 to 80 Shore D grades
Rigid Polyvinyl Chloride (PVC)	GEON Performance Solutions Resilience™ HC (PVC)	Excellent chemical resistance; physical integrity after chemical exposure; custom colors available; excellent solvent bonding to PVC
Rigid Polyvinyl Chloride/ABS (PVC/ABS)	GEON Performance Solutions Geon® HTX™ (PVC/ABS)	High temperature resistance; excellent chemical resistance; physical integrity after chemical/cleaner exposure; color branding available; excellent solvent bonding to PVC tubing

### PC, PA & PMMA

Polycarbonate (PC)	Covestro Makrolon® (PC)	Rigidity, toughness and clarity
PolyMethyl Methacrylate (PMMA)	Trinseo Plexiglas® Acrylics	Clarity; easy processing; BPA free; lightweight; chemical resistance; impact resistance
	Trinseo Plexiglas® SG Acrylics	Easy processing; BPA free; transparency; impact resistance; chemical resistance; lightweight, sterilizable by gamma and EtO
	Trinseo Plexiglas® VS-UVT Acrylics	Clarity; easy processing; BPA free; lightweight; UV transparency for diagnostic applications



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### Styrenic Blends

Styrenic Blends	Trinseo MAGNUM™ (ABS)	Opaque; custom colors; excellent impact and flow; low residuals; ISO 10993 tested
	AmSty STYRON™ (GPPS)	General purpose (crystal) polystyrene; good clarity; stiff; easy processing with no pre-drying needed; good heat distortion resistance; excellent gloss, feel and appearance; excellent dimensional stability; sterilizable (except autoclave)
	AmSty STYRON™ (HIPS)	High impact polystyrene; opaque; impact resistant; easy processing with no pre-drying needed; good heat distortion resistance; glossy to matte surfaces available; excellent feel and appearance; excellent dimensional stability; sterilizable (except autoclave)
	INEOS Styrolution Zylar® & Clearblend® (MBS)	Exceptional toughness; excellent clarity; low specific gravity; no pre-drying needed; excellent thermal stability; superior chemical resistance
	INEOS Styrolution NAS® (SMMA)	Sparkling clarity; color neutrality; good rigidity; easy processing; no pre-drying needed; excellent alcohol resistance
	INEOS Styrolution Lustran® (SAN)	Rigid; heat resistant; outstanding transparency; good overall chemical resistance; superior processing; good scratch resistance
	INEOS Styrolution Styrolux® (SBC)	Good transparency and excellent toughness; easy and versatile processing; great for adding toughness to styrenic polymer blends
	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

### PP & PE

Polypropylene (PP) & Polyethylene (PE)	INVISTA™ (PP)	Good clarity; strength; flexible and rigid options; easy processing; good chemical resistance; sterilizable grades available
	Pinnacle™ (PP)	
	Dow™ HEALTH+ Polymers™ (PE)	
	Lyondellbasell™ (PP) & (PE)	

## FLEXIBLE COMPONENTS: BIOTECH/LIFE SCIENCES, CHEMICAL, CLINICAL, ENVIRONMENTAL, FOOD & MATERIALS TESTING

### Applications include:

- Caps
- Closures
- Septa
- Well pads
- Stoppers

### Flexible Component Solution Needs:

- Materials compliant with ISO 10993 & USP Class VI, if required
- Automation
- Seal integrity
- Flow control
- Improved handling & grip

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

Thermoplastic Elastomers (TPE)	Avient Versaflex™ HC Gasket & Stopper Series (TPE)	Proven HC solutions with hardness ranges 34–59 Shore A; autoclave, radiation and EtO sterilizable; re-sealability; good compression set; low extractables; good overmold adhesion to PP; good low temperature properties
Thermoplastic Polyester Elastomers (TPC-ET)	DuPont™ 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; grades with regulatory support available
Thermoplastic Polyurethane (TPU)	Covestro Texin® (TPU)	Biocompatible; soft touch; sterilizable; good chemical resistance; excellent bonding to polar substrates like PC; soft 70 to 90 Shore A grades
Thermoplastic Vulcanizate (TPV)	Avient Versalloy™ HC Series (TPV)	Proven HC solutions with hardness range 45–90 Shore A; autoclave, radiation and EtO sterilizable, good compression set, low extractables, bondable 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; durometer range from 55A to 40D; gamma and EtO sterilizable

### Thermoset Silicone Elastomers

Thermoset Silicone Elastomers/Liquid Silicone Rubber (LSR)	DuPont™ Liveo™ Silicone Elastomers (LSR)	Biocompatible; non-irritating and non-sensitizing; sterilizable; made without plasticizers, phthalates or latex
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### SBC Copolymer

Styrene Butadiene Copolymer (SBC)	INEOS Styrolution Styroflex® (SBC)	Rubber-like mechanics; outstanding resilience; toughness and transparency; extremely high elasticity; excellent bonding to other polymers
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## SOLUTIONS FOR LABWARE & DIAGNOSTICS

Custom Solution Needs	Avient™ Custom Solutions
FDA-registered pre-colored resins and masterbatch options, color coding for safety and brand recognition	Avient collaborates with key material suppliers to provide FDA-approved pre-colored resins  Avient OnColor™ HC Plus offers customizable color masterbatch solutions pre-certified for biocompatibility using ISO 10993 and USP Class VI test protocol
Precise & complete dosing	Avient's low retention additive technology for pipettes



# FORMERRA

## Healthcare Supplier Line Card

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 and a host of services focused on helping you succeed.



# FORMERRA HEALTHCARE SOLUTIONS



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## At Formerra, we're prepared to help you:

- Mitigate risk
- Optimize design
- Accelerate commercialization

Contact us today to learn more about how we can help you overcome your toughest challenges.



## INSTRUMENTAL LABWARE & DIAGNOSTICS DEVICES

Current trends in healthcare show a shift from reactive treatment to proactive prevention; the emphasis is on identifying illnesses and treatments sooner to improve patient outcomes. Whether used in a research or clinical setting, choosing the right polymer materials for your device will make it more durable and can help physicians achieve results more efficiently.

- Pipettes
- Trays
- Vials
- Collection Cups
- Lids & Closures
- Beakers
- Test Tubes
- Funnels
- Diagnostic Kits
- Plungers & Stoppers
- Septa
- Well Pads

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