



Product Selection Guide

# FORMERRA HEALTHCARE SOLUTIONS

Pharmaceutical  
and Medical  
Device Packaging



# Pharmaceutical and Medical Device Packaging

The functionality and appearance of pharmaceutical and medical device packaging provides assurance to physicians, healthcare providers, patients and caretakers that a medicine or device is safe, sterile and effective. Despite the medical or home healthcare setting, the manner in which pharmaceutical drugs and medical devices are packaged is critically important.

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.



## 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.



# Pharmaceutical and Medical Device Packaging

## Applications include:

- Pre-filled flush syringes
- Caps and closures
- Blow molded bottles
- Pharmaceutical vials
- Sterilization trays and mats
- Pouches

## Packaging Solution Needs:

- Materials compliant with ISO 10993 & USP Class VI, if required
- Increased assurance of sterility
- Excellent barrier resistance to avoid leaching
- Superior impact resistance to protect medical devices and drug solutions
- Chemical resistance levels aligned with specific application requirements
- Additives and colorants designed for healthcare packaging applications

## ABS, SAN, Polystyrene

AmSty Styron™ PS	Family of general purpose and high impact polystyrene available with excellent dimensional stability, toughness, gloss, processability and impact resistance
Ineos Styrolution Luran® SAN	Good transparency and excellent chemical resistance to high stiffness, extraordinary heat resistance as well as very good dimensional stability
Ineo Styrolution Lustran® ABS	Rigid; heat resistant; outstanding transparency; good overall chemical resistance; superior processing; good scratch resistance

## Copolyester, Polycarbonate, PVC

Eastman Eastar COPE	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
Covestro Makrolon PC	Transparent and opaque; excellent impact resistance; low friction, glass-filled and lipid resistant options; sterilizable by gamma, EtO, e-beam and steam; biocompatible per ISO 10993-1 and USP Class VI
GEON Performance Solutions Resilience™ HC (PVC)	Excellent chemical resistance; physical integrity after chemical exposure; custom colors available; excellent solvent bonding to PVC

## Polyamide / Nylon

Celanese Zytel® PA	Good toughness and colorability; acceptable EtO and autoclave sterilization (limited gamma/e-beam sterilization performance); improved dimensional stability; chemical resistance
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## Polypropylene

LyondellBasell Pro-fax™ PP & Purell™ PP	Family of homopolymers, copolymers, clarified resins and random copolymers offered in a variety of radiation resistant, heat stable and nucleated grades
INVISTA PP	Family of homopolymers, copolymers, clarified resins and random copolymers with autoclavable, heat stabilized, animal-free and radiation-resistant grades
INEOS Olefins & Polymers USA PP	Family of homopolymers, copolymers, clarified resins and random copolymers with different melt ranges
Pinnacle Polymers PP	Family of homopolymers, copolymers, clarified resins and random copolymers with emphasis on good processing stability, low extractables and autoclavable grades

## Polyethylene

Chevron Phillips Marlex®	Family of HDPE, LDPE and LLDPE with moderate flow, excellent impact strength, good stiffness and durability
Dow DOWLEX™	Family of LLDPE with grades focusing on impact and abrasion resistance, durability, puncture and tear resistance and UV and water/moisture resistance
Dow ENGAGE™	Family of polyolefin elastomers with excellent impact resistance, flexibility, toughness and processing characteristics
Dow HEALTH+™	Family of HDPE, LDPE and LLDPE with low melt index, outstanding flexibility, excellent toughness and high purity grades
LyondellBasell Alathon™	HDPE resins commonly used in pressure pipe and blown film, general purpose and thin-wall injection molding grades, and blown film grades known for their moisture barrier performance
LyondellBasell Petrothene	Family of HDPE, LDPE and LLDPE typically used in film with good processability, impact and clarity
LyondellBasell Purell™	Family of HDPE and LDPE grades with high fluidity, very good transparency, good impact strength and excellent processability
Westlake Chemical PE	Family of low density copolymers, linear low density plastomers, functionalized polymers and waxes for flexible packaging, extrusion coating and niche markets

## Thermoplastic Copolyester Elastomer

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; grades with regulatory support available
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Email **[phd@formerra.com](mailto:phd@formerra.com)**

## Capabilities

Design Support

Market Intelligence

Material Selection

Custom Formulations

Manufacturing Optimization

Technical Support

Supply Chain Optimization

Regulatory Compliance Support

Global Reach