



# PHARMACEUTICAL

Performance plastics are booming in the pharmaceutical industry because of their durability, ability to be sterilized, easy machinability to exacting specifications and cost effectiveness.

## APPLICATIONS

- Tanks (water, chemical, fuel)
- Pharmaceutical pill and tablet production
- Intravenous and infusion devices, such as insulin pens and inhalers
- Blister packaging
- Pharmaceutical pouches for dose packaging of powder and topical medicines
- Strip packs for sample-size oral drug applications
- Medication tubes
- Parenteral packages
- Pre-fillable dose-measured syringes
- Tamper-evident and childproof closures
- Droppers
- Measuring caps and spoons
- Bottles for: ophthalmic use, syrup, tablets, drops
- Drinkable single dose systems
- Vials
- Ampules
- Syringes
- Intravenous containers

## ADVANTAGES MAY INCLUDE

- Can be sanitized using hot or cold water combined with detergents and other harsh chemical cleaners
- Easily fit into self-lubricating devices
- Lightweight
- Complies with North American and European regulations
- Cost effective
- Nonflammable
- Delivers critical and emergency medication quickly
- Antimicrobial options prevent infections
- Versatile; easily machined to precise specifications
- Materials meet highest USP or FDA standards
- Dimensional precision
- Chemical stability
- Mechanical and temperature resistant
- Machines well for design functionality and ergonomics

## MATERIALS

- Acetal (POM)
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- Acrylic (PMMA)
- Acrylonitrile-Butadiene-Styrene (ABS)
- Ethylene-Chlorotrifluoroethylene (ECTFE)
- High-Density Polyethylene (HDPE)
- Nylon/Cast Nylon (PA)
- Polycarbonate (PC)
- Polyester Terephthalate Glycol Modified (PETG)
- Polyetherimide (PEI)
- Polyethersulfone (PES)
- Polyethylene (PE)
- Thermoplastic Elastomer (TPE)
- Thermoplastic Polyester (PBT)
- Ultra-High Molecular Weight Polyethylene (UHMW-PE)
- Polyethylene Terephthalate (PET)
- Polyphenylene Sulfide (PPS)
- Polypropylene (PP)
- Polystyrene (PS)
- Polyvinyl Chloride (PVC)
- Polyvinylidene Fluoride (PVDF)



## DID YOU KNOW?

Plastics are the leading materials used in pharmaceutical packaging based on the breadth of applications for which they are suitable, their cost effectiveness and their favorable barrier and aesthetic properties.