



# Life Sciences

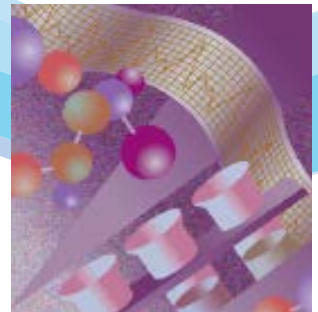
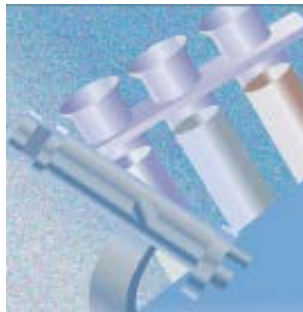
Life sciences applications demand durability, reliability, regulatory compliance, traceability from raw materials and design flexibility. What's the Rx for life sciences needs? Plastics, of course!

## Applications

- Laboratory equipment — tubing, seals, hoses, optics, fluid handling
- Pharmaceutical — tablet production, packaging,
- Dental — instruments, grips, drilling/suction equipment, polishing equipment
- Medical — instruments, syringes, catheters
- Prosthetic/orthopedic appliances
- Surgical applications — minimally invasive equipment, surgical trays/grips
- Diagnostic equipment — MRI, CAT, X-ray machines, ultrasound/radiation equipment
- Safety equipment
- Corrosion-resistant equipment

## Advantages May Include

- Transparency to X-rays
- Traceable from raw material to finished product
- Stable under most sterilization techniques
- Withstands a wide temperature range
- Dimensionally stable
- Resistant to corrosion and radiation
- Biocompatibility per ISO 10993-5, FDA compliant
- High impact strength
- Easy to machine
- Lightweight
- Availability in numerous colors for color-coding
- Wears well, even without lubrication
- Quieter than metal
- Comfortable feel (instrument handles are softer, warmer to the touch than metals)



## Materials

- Acetal Polyoxymethylene (POM)
- Acrylonitrile-Butadiene-Styrene (ABS)
- Acrylic (PMMA)
- Polyetheretherketone (PEEK)
- Polyetherimide (PEI)
- Polyethylene (PE)
- Polymethyl Pentene (PMP)
- Polysulfone (PSU)
- Polyphenylsulfone (PPSU)
- Polycarbonate (PC)
- Polypropylene (PP)
- Polyester Terephthalate Glycol Modified (PET-G)
- (PETG Copolymer)
- Polyvinyl Chloride (PVC)
- PVC/Acrylic Alloy Sheet
- Styrene Acrylonitrile Copolymer (SAN)
- Thermoplastic Elastomer (TPE)
- Ultra-High Molecular Weight Polyethylene (UHMW-PE)
- High-Pressure Laminates (HPL)
- Thermoplastic Composites (phenolics)

## Did you know?

Describing the surgery to implant the first artificial human heart, surgeon William Devries, said the new heart snapped into place “just like closing Tupperware.”



## Environmental and Safety

Considering the total carbon footprint, including costs of raw materials, manufacture, transport, fabricate, install, maintain, plastics compare favorably with more traditional materials. Also, plastics are safer to handle and install. When you consider that most plastics are readily recyclable, they can become the most environmentally responsible and safest choice for many demanding life science applications.

