Medical Molding

China Array's core competency is molding high performance thermoplastics including several specifically for medical devices (see list at right). Key applications are highlighted below.

Injection Molding PEEK Surgical Applications

China Array injection molds PEEK surgical components. In several surgical applications PEEK (polyetheretherketone) outperforms stainless steel. PEEK offers the highest chemical resistance of any semi-crystalline plastic with excellent retention of mechanical properties up to 570°F (300°C).

PEEK can be sterilized using all conventional sterilization methods, including steam, ethylene oxide, vaporized hydrogen peroxide and gamma radiation without losing properties or dimensional specifications, and withstands continuous use temperatures of 240^0 C with low moisture absorption.

Key Medical Grade Polymers Molded by China Array

- Polyetheretherketone (PEEK)
- Polyetherketoneketone (PEKK)
- Polyetherimide (PEI)
- Polysulfone (PSU)
- Polyethersulfone (PES)
- Polycarbonate (PC)

Molding Solutions for Medical Electronics

Solve the challenges of EMI/EMC in medical electronics with components injection molded from *Wave-X*™ material. Molding offers multiple advantages beyond the traditional methods of stamped metal and VOC-based coatings: economy, precision and EHS benefits. *Wave-X*™ energy suppression and absorbing materials, with attenuation ranges from 5 MHz to 40 GHz, provide the flexibility to build reliable and cost-effective EMI absorbing enclosures for troublesome chips and circuits. China Array's experience with a wide variety of polymers helps it formulate and process shields with maximum fill percentages while maintaining mechanical properties.

Manifolds Used in FDG Synthesis of Radiopharmaceuticals for PET Scans

Manufactured at the company's state-of-the-art HPTP molding facilities in Wuhan, China the manifolds, used to isolate isotopes for PET scans, are molded from Solvay Advanced Polymers' Udel® polysulfone (PSU) resin and medical grade high density polyethylene (HDPE), offering medical OEMs excellent chemical resistance to reagents and sterilization; exceptional tensile and impact strength to withstand the rigors of the FDG synthesis process; and the dimensional integrity needed to maintain hermetic seals up to 36 psi.

Dental Composite Dispenser

Dental composites, used to fill cavities and gaps between teeth, are delivered to the tooth in thin layers and cured to hardness using blue wavelength light. The composite dental dispenser's smooth trigger action delivers the viscous composite in a thin layer (2 to 3 mm thick) while maintaining consistency for optimum fill, adherence and curing. An ergonomic design provides the strength and leverage necessary for precise layering.

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