



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 240⁰ 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 such as dimensional integrity, long life and thermal stability.

Solenoid Valve Housings Molded from High Performance Thermoplastics



Solenoid valves used in the medical industry require housings made from high performance polymers to insure chemical, radiation and heat resistance with minimum water absorption. As valves become increasingly miniaturized, building molds and molding to tight tolerances becomes critical. China Array excels at executing precision tooling and close tolerance molding, and in selecting the proper materials for the electrically sensitive, yet chemically harsh, environments in which medical solenoids are used.

Veterinarian Devices



China Array molds dairy and veterinary components for the US and European markets. The components must meet stringent FDA and CE standards, be resistant to milk fat, withstand CIP cycles including alkaline detergents and acid rinses, have excellent tensile and impact strength while maintaining high clarity, and handle temperature ranges of -50⁰ to +190⁰ C. Dimensional precision and stability is required for water and air tight seal applications in harsh environments while operating up to 20 hours per day. China Array's experience with Polysulfone, Polyetherimides and other high end amorphous polymers allows it to create solutions to match these demanding requirements.

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Clean Room Molding**

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