

# PLASTECH CORPORATION



## Injection Molding FAQs

### **Is injection molding right for my part requirements?**

Injection molding insures consistency. Parts can be molded from a wide variety of materials onto complex shapes with tight tolerances at high rates of production. Part usage typically determines resin choices. Part geometry affects the cost of tooling. The number of parts needed over the life of the project impacts molding and tooling cost.

### **What size parts can you make?**

We operate 44 presses ranging from 30 tons of clamping force to 1500 tons. Shot sizes range from 3 ounce to 291 ounce. Typical injection molding clamping force ranges from 1-1/2 to 5 tons per square inch (depending on part thickness and resin selection) so a 1500-ton press can produce parts with a surface area of approximately up to 1000 square inches.

### **What kind of resins do you mold?**

Plastech molds parts from a variety of commodity resins and engineering-grade resins, including Xenoy, Nylon, Ultem, PEEK, Polystyrene, Polyethylene and both long and short fiber glass-filled blends. Resin is typically determined by the application. Our project engineers can offer some guidance but the customer has final approval on resin selections.

### **How do you ensure quality?**

Plastech is a world-class molder. All injection molding presses are equipped with process monitoring of every shot. Plastech Corporation is ISO9001:2008 certified - in fact, we were one of the first injection molders in the United States to achieve ISO certification (1994).

### **Do you design and build injection tools?**

Plastech provides extensive engineering assistance during the design phase and complete project management for new tool builds. We offer mold flow simulation and analysis to assure that your mold produces the parts you designed.

### **How much does a mold cost?**

Molds can vary from a few thousand dollars to hundreds of thousands of dollars. Part complexity and number of cavities are the biggest cost factors. The number of cooling lines or special metal components may increase tool cost but help speed part production and minimize heat distortion. Complex geometry may require additional tool actions to allow parts to be ejected from the mold.

**What is the price difference between domestic and offshore tooling?**

Plastech offers both domestic and offshore tooling options. Costs vary but offshore tooling can often shave upwards of 40% off the cost of a mold. Domestic tooling typically offers much shorter lead times.

**Who owns the injection tool?**

You do. The mold is designed specifically for your parts. You are free to take that mold anywhere once contractual obligations are fulfilled.

**How many shots will you guarantee from my mold?**

We build tools to accommodate the expected number of parts over the life of the project. Domestically produced tools can be built to a one million shot life if warranted. Some Plastech-built molds have produced several million shots with minor rebuilds over the life of the tool.

**How do you protect my mold?**

Each tool is put on a preventative maintenance program. Detailed records of shots, preventative maintenance, and mold modifications are kept on each tool in our possession. Experienced mold makers are available 7 days a week for tool care and maintenance.

**Can my mold be modified if I change my part designs?**

Plastech offers internal tooling capabilities for mold maintenance and minor modifications, within limitations of the original tool design. We work with a network of high-quality tool shops on major mold modifications.

**Can you mold around inserts or metal components?**

We have been a pioneer in over-molding of fabrics, metal, plastic components and filter media. We use robotics on all our injection presses to insure that metal inserts or other components are precisely nested in the mold before molten plastic is injected.

**Can you assemble my parts or provide custom decorating and packaging?**

Plastech Corporation offers a broad selection of customized in-plant assembly, finishing and packaging services. Whether press-side or through our specialized Assembly Department, we can provide the Decorating, Bonding, Testing and Assembly services that simplify your sourcing decisions.

**What kind of LEAN principles have you adopted?**

Continuous improvement has long been part of our core philosophy. Plastech Corporation practices 5S, in our work cells; we have standardized work with mold setup books, picture packets and work instructions. We are proud to serve on the Lean Council of a major customer.

**What information do you need to quote my project?**

Part prints or CAD files are the first step. Part samples or prototypes (if available) are always helpful. Specifics include resin, annual part quantity, budgetary estimates for tooling and parts, along with any requirements for prototypes, APQP, FEMA or PPAP.

**Why should I entrust my project to Plastech Corporation?**

Plastech is there for the long haul. Plastech is a financial stable partner that has been under continuous family ownership for over 55 years. A proven low PPM rate, a zero tolerance defect goal, and an ISO approved quality system would be enough for some companies. We operate 24/7 to ensure a reliable stream of finished components.