

# Liquid and High Consistency Silicone Rubber Molding Services

## Multiple material options for diverse applications

MRPC processes liquid silicone rubber (LSR) materials using highly advanced liquid injection molding (LIM) equipment. We have extensive experience in molding USP Class VI restricted and unrestricted silicone materials specified for use in FDA Class I, II and III devices. In addition, we also mold products using high consistency silicone rubber (HCR) materials using transfer-injection, compression and injection molding processes. We also offer contract assembly and pyrogen-free cleaning and packaging.

Silicone rubber is appropriate for a wide range of uses. Due to its biocompatibility, temperature resistance and mechanical resilience, silicone is widely used in medical applications because it is sterilizable and hypoallergenic for patient contact.

MRPC can process many types of restricted and unrestricted silicones into thin-wall, tight-tolerance components for use in healthcare applications. LSR has many advantages over other materials, including its faster cycle times, heat resistance and high strength. Its low viscosity allows the material to flow into thin, complex shapes, making it the ideal material for intricate or elaborate part designs. HCR offers a lower-cost entry into the marketplace due to its less expensive tooling and is more economical for shorter runs. With HCR, MRPC can mix small quantities and incorporate custom colors to meet your product's specifications. MRPC's team can work with you to determine the best material to meet your product specifications.

In addition to LSR and HCR molding, we can also assist you with your silicone extrusion requirements. We can extrude complex shapes and multilumen tubing, as well as incorporate wire or radiopaque materials into the tubing. We have also incorporated various silicone extrusions into assemblies via overmolding and bonding to create complex multicomponent devices.

MRPC's specialized capabilities in silicone molding include:

- Two-material molding
- Micro-molding of LSR and HCR
- Insert molding
- Silicone extrusion
- Laser piercing and finishing
- Assembly and testing
- Cleaning and packaging

Our team of experienced engineers can create products with the following specifications.

- Prototype sample quantity: 1 to 100
- Production run quantity: Up to 1 million
- Required lead time: 3-8 weeks with expediting options
- Part specifications:
  - Micro LIM Molding, micro parts: 0.04 to 25 grams
  - LIM Molding, standard parts: Up to 5 ounces
  - Extrusion: 0.015" to 0.75" in diameter

Design complexity, processes, and material choice will affect the final estimate.

