



## Medical Dip Casting

### Lubrizol: Your Trusted Partner for Dip Cast Medical Components and Devices

Lubrizol is your trusted partner in the development and commercial manufacture of high-quality dip cast medical components and devices. Our expertise in the dip casting process ensures that you receive exceptional dip cast medical components and devices that can be utilized across a wide range of medical sectors, including cardiology, reconstructive surgery, cosmetic surgery, bariatrics, and urology.

### Consistent Quality from Development to Production

At Lubrizol, we understand the importance of maintaining consistent quality throughout the entire process, from development to production. That's why we ensure that initial orders are produced per ISO13485 standards in ISO Class 7 and 8 cleanrooms. By utilizing the same quality equipment used for full-scale production, we guarantee that your orders meet the highest quality standards.

### Support for Product Development

Our dedicated new product development engineering team is here to support you every step of the way. We provide short lead times for development, allowing you to bring your products to market faster. Additionally, our team offers valuable advice on long-term manufacturability, ensuring that your products are not only developed efficiently but also cost-effectively for long-term production.

### Complete Medical Device Development, Design and Manufacturing Capabilities

With Lubrizol, you gain access to a comprehensive range of medical device design, development, and manufacturing services. Our expertise covers a wide range of materials, including silicone and thermoplastics. From sheeting to dip cast balloons, molded and extruded parts, and silicone tubing, we have the capabilities to manufacture, assemble, and sterilize all your medical devices.

Choose Lubrizol as your partner for complete medical device solutions, and experience the highest level of quality, expertise, and support throughout your product's lifecycle.

About Lubrizol Life Science - Lubrizol partners with customers to speed their innovative medical devices and differentiated pharmaceutical products to market. Our dedicated team provides best-in-class polymers and excipients, along with state-of-the-art product design, development, and manufacturing services, with the ultimate goal of creating solutions that improve patient outcomes. For more information visit [www.lubrizolmeddevicecm.com](http://www.lubrizolmeddevicecm.com).

# Medical Silicone Dip Casting

## Dip Casting Process

Dip Casting is a unique process in which a mandrel, custom-fabricated for the desired shape, is dipped in a silicone elastomer. Once cured, the silicone "shell" is removed from the mandrel, resulting in a hollow geometry balloon based on the mandrel shape. The silicone shell can be delivered as a component or integrated into more complex assemblies.



### Advantages

- Thin walls with tight tolerances
- No flash or parting lines
- Small or large geometries
- Geometry ratios of up to 5:1 max/min
- Complex or undercut geometries
- Quick prototype iterations
- Cost-effective low to medium volume manufacturing
- Broad material property options (durometer, elongation, etc.)



### Lubrizol Capabilities

- Material: Silicone Dispersion
- Typical Durometer: 20-40 Shore A
- Typical Thickness: 0.005-0.060 in. (0.1 - 1.5 mm)
- Typical Tolerance:  $\pm .002$ -.005" (0.05 - 0.13 mm) or  $\pm 10$ -20% of thickness
- Volume: 0.5mL-1000mL (pencil tip to water bottle)
- Exterior Surface: Smooth, Textured
- Interior Surface: Smooth, Matte
- Pigments, Low friction coatings



### Secondary Process Options

- Assembly
- Pouching, Packaging
- Sterilization
- Pad/Screen Printing
- ID Marking
- Die Cutting (Kiss or Through)
- Laser Cutting
- Spray Coating
- Surface Finishing/Features
- Sheeting and Films



- Wearables
- Microfluidics
- O<sub>2</sub> Permeability
- Bariatrics
- Urology
- Pediatrics
- Extreme Temperature
- Advanced Wound Care
- Reconstructive Surgery
- Cosmetic Surgery
- Cardiology