



Epoxy™ Mold Solution

Create Robust Replica Mold

Epoxy™

EPOXY MOLD REPLICATION UNIT

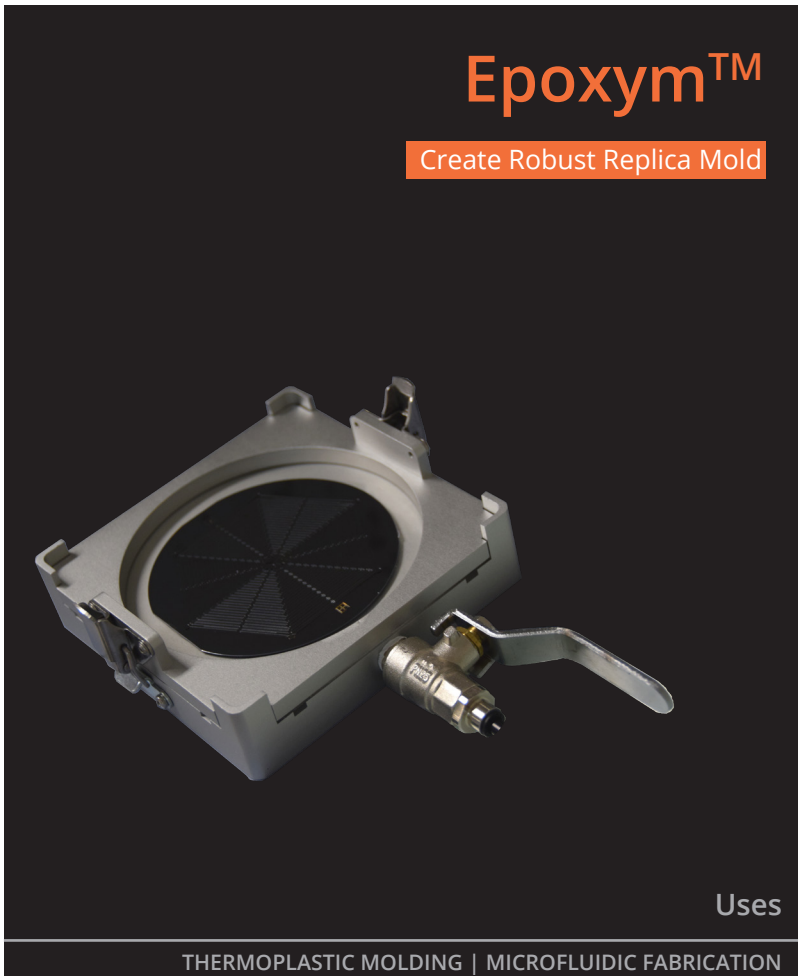
Epoxy™ is a multi-functional and easy-to-use system to replicate molds into epoxy resins. This is a solution to preserve your fragile and valuable silicon master mold manufactured by microfabrication techniques (e.g. SU8 photolithography, DRIE etching, ect). Replication can be performed several times whilst avoiding risks of breakage of the master mold. The two-step system involves the fabrication of a counter mold in silicone, which is then used to replicate the master into high temperature resistant epoxy mold suitable for embossing.

APPLICATIONS

- Soft Thermoplastic Molding
- Microfabrication
- Microfluidic Fabrication

KEY FEATURES

- Monolithic & Robust Mold
- High Replication Fidelity: 0.2 μm
- High Temperature Resistant Epoxy Mold (180°C)
- Produce 1 to 7 mm Thick Mold
- Suitable for Repeative Embossing
- Two-step Fabrication



TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS	
Dimension	16 x 23 x 6.5 cm ³
Vaccum Inlet	6mm rigid tubing
Wetted Materials	Al and FKM
Weight	1.35 kg

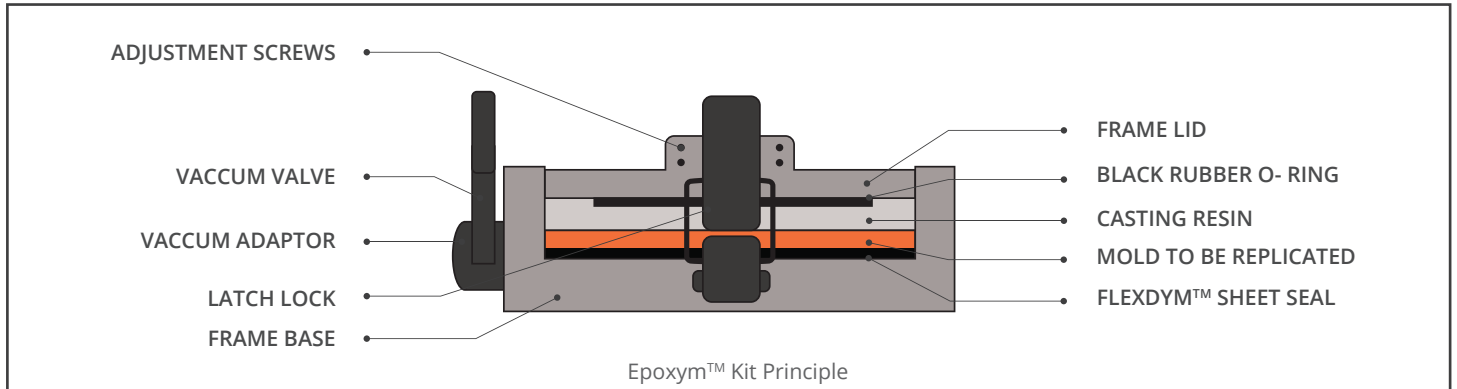
SPECIFICATIONS : CONFIGURATION A	
Max. Master Size	Up to 4" in diam.
Max. Master Thick.	8 mm
Operating Temp.	0°C to 90°C

SPECIFICATIONS : CONFIGURATION B	
Counter Mold thick.	3 to 7 mm
Operating Temp.	0°C to 140°C



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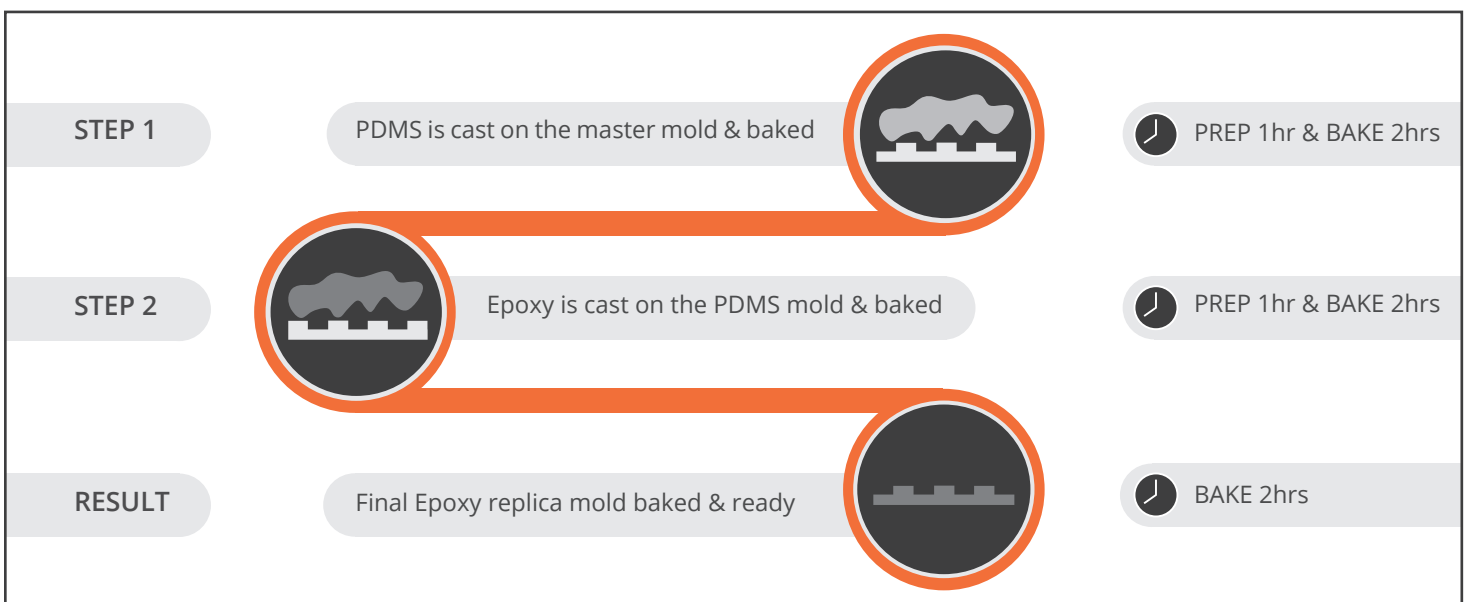
PRINCIPLE

The mold frame is composed of two parts: the base/bottom of the frame and the lid of the frame. The base contains a small hole in its center, allowing for a vacuum seal to be created during the molding process. The vacuum can be controlled using a vacuum valve. The lid contains a large circle opening at its center, to enable casting of the mold. The entire system has an adaptor connecting the frame to the vacuum pump tubing.

TWO STEP SYSTEM

Epoxy™ is specifically sized to 4-inch master mold wafers. If you are interested in larger size wafers, please contact and we will determine whether or not we can create a custom frame for you.

This system can be utilized to create replica molds of other materials. We advise using epoxy replica mold specifically for embossing applications. Epoxy replica molds produced using the Epoxy™ kit have high thermal resistance and can often be used up to hundreds of times without microstructure damage or deterioration.



STORAGE AND HANDLING

The equipment heats up and one must always wear heat resistant gloves while operating. Products must not be transported while plugged in or hot. Store products in standard room condition and in an adapted box.