

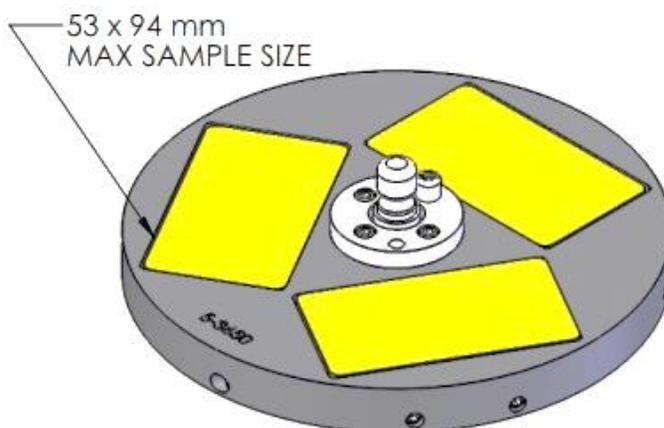
## Silicone Mold Cups

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Silicone mold cups are made of silicone rubber and are used to encapsulate samples in acrylic or epoxy cold mounting products. Their 0.5" thick walls and 1" cup depth provides durability, stability and dimensional consistency from mount to mount. The mold cups are offered in a variety of shapes and sizes and have corresponding central force sample holders available for use with Allied grinding/polishing machines with a power head and either a 10" or 12" platen.



Item Number	Mount Dimensions	Sample Holder
#197-20000	2.25" x 4.25" x 1.25" (57 x 108 mm x 32 mm) oval	Not yet available
#197-20005	2" (51 mm) diameter	#5-3440, #5-3662
#197-20011	1" x 2" (25 x 51 mm) rectangle	#5-3490
#197-20025	1.3" x 2.6" (33 x 66 mm) rectangle	#5-3491
#197-20030	1.9" x 1.9" (48 x 48 mm) square	#5-3494
#197-20050	2" x 3.6" (51 x 91 mm) rectangle	#5-3650
#197-20055	1.7" x 4.6" (43 x 118 mm) rectangle	#5-3668
#197-20060	1.75" x 3.5" (45 x 89 mm) rectangle	#5-3669



5-3650 Sample Holder for use with 197-20050 mold cups

## Instructions for Use with Epoxy

Since the mixing ratios for most epoxy products are formulated for 1.25"  $\varnothing$  x 1" T mounts to cure at room temperature (77° F, 25° C), using these mixing ratios at room temperature with the larger silicone mold cups can cause the epoxy to have a higher exothermic temperature during the cure cycle. If the exothermic temperature becomes too high, the epoxy will overheat and possibly crack, turn yellow, shrink or damage the sample. Two ways to overcome these problems are as follows:

1. Reduce the ratio of hardener to resin of the epoxy being used. It may take some experimentation to determine the correct ratios and amounts needed for a particular mold size. See the appropriate epoxy product guide for more information.
2. Dissipate heat from the curing epoxy by placing the silicone mold cup in a shallow bath of cold water.

## Instructions for Use with Acrylic

The mixing ratio for most acrylics is 2:1 powder to liquid mixed by volume. It may take some experimentation to determine the correct amounts needed for a particular mold size while maintaining the correct mixing ratio. See the appropriate acrylic product guide for more information.

## Expected Mold Life

When using the following cold mounting materials, silicone mold cups will last for:

- Acrylic – 100+ mounts
- Epoxy – 20-30 mounts, depending on the cure temperature and active chemicals of the specific epoxy used

After the indicated number of uses, the molds will become brittle and hard, causing them to flake. The mounting material will also adhere to the mold walls, making it more difficult to remove mounts after they are cured.

Mold release (#200-10006, #200-10010 or #200-10015) can be used to reduce adhesion of the mounting material to the mold walls, making it easier to remove cured mounts from the molds. Using mold release can also prolong the life of the mold cups by protecting the silicone from chemicals found in some cold mounting materials.

## Technical Information

Silicone Rubber	
Hardness (Shore A)	40
Tensile Strength (MPa)	5.5
Elongation (%)	350
Tear Strength (kN/m)	25
Operating Temperature (°C)	-60 ≤ T ≤ 250