



## Silicone Mold Cups Item Number 197-200XX

Silicone mold cups are intended for encapsulating samples in acrylic or epoxy cold mounting products. They feature a 1/2-inch (up to 5/8-inch on the larger molds) wall thickness for durability and heat dissipation, and they can be used at temperatures between -60° C and +250° C. They are sold in a variety of sizes, with matching central force sample holders for use with Allied's PH-4™ or PH-6™ power head polishing systems:

Silicone Mold Cup	Mount Dimensions	Sample Holder
#197-20000	4.25" x 2.25" (108.0 mm x 57.2 mm), with rounded ends	Not yet available
#197-20005	2" (50.8 mm) diameter	#5-3440, #5-3662
#197-20011	1" x 2" (25.4 mm x 50.8 mm)	#5-3490
#197-20025	1.3" x 2.6" (33.0 mm x 66.0 mm)	#5-3491
#197-20030	1.95" x 1.95" (49.5 mm x 49.5 mm)	#5-3494
#197-20050	2" x 3.6" (50.8 mm x 91.4 mm)	#5-3650
#197-20055	4.625" x 1.7" (117.5 mm x 43.2 mm)	#5-3668
#197-20060	3.5" x 1.75" (88.9 mm x 44.5 mm)	#5-3669

### Instructions:

Most epoxy products are formulated with mixing ratios for curing a 1.25" diameter x 1" thick (31.75 mm x 25.4 mm) mass at room temperature (77° F, 25° C). With the larger mass of the silicone molds, the high exothermic temperature will overheat the epoxy and damage the sample; it could also crack, turn yellow, or shrink. Two strategies can be used in order to overcome these problems:

- 1) Reduce the ratio of hardener to resin of the epoxy being used (see that product's instructions for the suggested ratio). *Experimentation may be necessary.*
- 2) Dissipate heat from the curing epoxy by placing the silicone mold cup in a shallow bath of cold water.

Mold release can be used to help reduce adhesion of the mounting material to the mold walls, making it easier to remove cured mounts from the rubber molds. Mold release will also protect the silicone from some chemicals found in cold mounting materials, prolonging the life of the silicone mold cups.

### Expected mold life, when using the following cold mounting materials:

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

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