

SILPAK, Inc

470 E. BONITA AVE. POMONA, CA 91767
PH (909) 625-0056 WWW.SILPAK.COM FX (909) 625-0082

Metal Powder Filler "Cold Casting"

Metal Powders are added to resins to create metallic finish sculptures or castings. The method is known as "Cold Casting," whereby a metal powder is blended with a Polyester or Urethane Resin, and poured into a Silicone RTV mold. Once part has cured, it is removed and the surface is polished to a desired finish, and then sealed to prevent oxidation. This technique is faster and cost effective for producing metal parts over traditional methods of foundry casting, i.e. lost wax process.

Available Sizes: 1-5 lb Jars, 10 lb Jar, 50 lb Pail

METAL POWDERS Blend 200-300% with Resin

Bronze	CB-21
Copper	CC-11
Gold	CG-10
Silver	CS 73
Pewter*	AP 120** Add up to 100% with Resin

Amount of Metal Filler: Recommended levels of additional filler are based on Total Resin Weight—A + B. Fillers are premixed to the A-side of mixture prior to blending both components. *Example:* Total Resin Weight is 200 Grams. Using Bronze CB-21 @ 300% mix ratio, add 600 Grams to resin (Part A of Urethane) and mix well prior to adding hardener (Part B of Urethane).

Recommended Resins: Polyester—Gelcoat (Clear) and SPR-29L Clear laminating, or Urethane Casting Resin—Siltool, Silcast II, Quickcast.

Method: Using Silicone RTV Mold

Mixing and Processing

- 1) Blend appropriate amounts of metal filler with resin and pour into mold cavity. If parts are small, then solid casting is easiest—filling the entire mold cavity with metal/resin mixture. But for larger size parts, slush casting—rotating mold or brushing in metal/resin till it sets up—then back filling the hollow cavity with straight resin to reinforce and strengthen part works well.
- 2) If slush casting, additional weight can be added to the backfill resin to simulate the weight of real metal. Lead, shards of metal, or adding CC-200 filler can be added to achieve this effect.
- 3) Allow part to fully cure before demolding—45minutes to several hours. **Note:** Adding fillers will slow resin gel and cure times, especially in thin cross section areas; therefore allow extra time to demold part. To accelerate cure, add heat, i.e., pre-heat mold prior to casting.

Finishing and Sealing

- 1) Using fine steel wool or Scotch Brite pad, hand abrade the surface to bring out the desired level of gloss and shine. Once metal surface is exposed, move to finer grits of steel wool from 0 to 0000. Care should be taken not to abrade past the metal surface. For high polish, use a plastic rouge and buffing wheel.
- 2) Once desired finish is achieved and to prevent oxidation, apply a high gloss clear coat—Clear urethane varnish, Acrylic clear coat.

Storage:

Properly store all fillers in airtight, sealed containers to avoid moisture contamination.

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. EACH USER OF THE MATERIAL SHOULD THOROUGHLY TEST ANY APPLICATION AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZING. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ON ANY PARTICULAR PATENT.