

Two-Part Cold Mounting Kit



Instructions for Overnight Curing

Items Needed:

Resin/Hardener Kit (SPI #01300/01302)
Epoxy Release Agent (SPI #01364/01365)
Cup or Suitable Container (paper not plastic)
Ring Forms (SPI #01345-01348) Alcohol
Spec-Klips (SPI #01369) Glass Stirring Rod
Swabs (SPI #05182) Tweezers (SPI #SOOP)

SPI-Wipers (SPI #05097) Glass or Sheet Metal Plate

Optional Items:

Vacuum Source (SPI #10404) Vacuum
Desiccator (SPI #01822/01823) Vacuum
Grease (SPI #05040/05041/05054)

Detailed Mixing Instructions:

1. Weigh desired amount of resin (approximately 20g for a 1" high by 1-1/4" diameter ring form). Remember to account for tare weight of container.
2. MIX 100 PARTS RESIN WITH 24 PARTS HARDENER. Do not estimate weights.
3. Stir thoroughly with glass rod using slow "figure eight" motions for 5-10 minutes, being careful to minimize air bubbles.
4. Use a swab to spread a thin layer of epoxy release agent on the edge of the ring form(s) and surface of plate. (If mount is to be removed from ring form, then coat the inside surface of the ring form also). Allow to dry.
5. If needed, put Spec-Klip on sample. Place inside ring form on plate.

Note: If sample is porous or cracked or if epoxy has many unwanted air bubbles, omit Step #6 and refer to Steps #7 - 12 for vacuum impregnation instructions.

6. Slowly pour epoxy over sample to desired height. Allow to set overnight. Go on to Step #13 for removal of cured mount.

Optional Vacuum Impregnation Instructions

7. Place plate into vacuum desiccator with ring form, being sure that plate has coating of epoxy release agent.

8. Place sample on its side within ring form and pour enough epoxy to cover sample but preferably to not more than half of the ring form height. (This will help contain the epoxy while "bubbling" under vacuum.)

9. If needed, apply vacuum grease to gasket or lid rim of desiccator, spread evenly and put lid on tight.

10. Connect desiccator to vacuum source and draw vacuum slowly using stopcock to control the air flow. This process should continue until bubbling slows to a steady low rate, approximately 15- 30 minutes depending on porosity and number of samples, bubbles in epoxy, etc.

HELPFUL HINT -- If ring form is overflowing, epoxy level could be too high, vacuum may be being drawn too fast, or both. Allow air back into desiccator very slowly by opening stopcock. This should cause bubbles to subside and allow process to begin over.

WARNING -- DO NOT KEEP MOUNTS UNDER VACUUM TOO LONG OR THE EPOXY WILL START TO HARDEN WITH THE SAMPLES IN THE WRONG POSITION!!!!

11. Let air back into desiccator and carefully remove plate with mounts.

12. Use tweezers to turn samples upright and add epoxy to desired height, being careful not to introduce air bubbles around the sample or to disturb the sample. Allow epoxy to set overnight.

Cleanup & Removal

13. **CLEANUP** - Epoxy can be removed before it is cured from hands, instruments, etc. using alcohol and SPI-Wipers.

14. **REMOVAL** - Remove ring form from plate by tapping sideways on side of ring form near plate. If removal of mount from ring form is desired, place mount (sample side up) in suitable press to support the ring form while applying pressure slowly and evenly to mount.

Normal metallographic grinding and polishing procedures may now be performed.