

List of equipment, tools, and supplies for mounting micro-minerals

Compiled by Julian C. Gray, Focal Point Mineralogy for the
Georgia Mineral Society Micromount Co-chair

The following is a list of equipment and supplies that I have found useful in micromounting over the years. Many of these things can be found at local hobby stores, art supply houses, or hardware stores. For those items that are unique or harder to find I have listed supplier and links to their websites.

In the Field:

In addition to the normal field collecting tools, here are some other common items the micromounter may want to carry in the field:

- Magnifier or Optivisor
- Egg crates – the ubiquitous accessory of micromounting
- Toilet paper (FOR WRAPPING SPECIMENS)

At Home:

Magnification and good light:

Many of the tasks required to create a micromount are highly precise and therefore best done with the aide of magnification and good light.

- 10x triplet hand lens – For selecting material to mount.
- Stereomicroscope – Best option, leaves both hands free.
- Optivisor – I personally find these difficult to use, but many people love using these.
- Desk light

Boxes:

Micromount boxes

Althor Products:

- P-1 Micromount Boxes: <https://www.althor.com/p-1>
- Paper liners for P-1 micromount boxes (optional depending on your mounting style): <https://www.althor.com/accessories-black-paper-liner-for-p-1-box>
- Magnifier boxes: <https://www.althor.com/magnifier-box>

CR Scientific – <http://www.crscientific.com/microboxes.html>

Thumbnail boxes, also called Perky boxes

CR Scientific – <http://www.crscientific.com/perkyboxes.html>

Shannon & Sons – <https://shannonsminerals.com/shop/shannonsminerals/dosen-faltschachteln/us-typ-perky-dosen.html?dir=desc>

Althor Products

- WITHOUT STYROFOAM INSERTS <https://www.althor.com/h-33br-2>
- Styrofoam inserts <https://www.althor.com/114w-white-styrofoam-insert-for-black-based-plastic-boxes>

Denver Rock Boxes – <http://rockboxes.com/perky.html>

Another common Style:

Althor Products

- Boxes without Styrofoam inserts <https://www.althor.com/h-5r>
- Styrofoam inserts for these boxes <https://www.althor.com/11w-3>

In addition to Perky boxes and the classic micromount box, Shannon & Sons has a variety of boxes of various types.

<https://shannonsminerals.com/shop/shannonsminerals/dosen-faltschachteln.html?dir=desc>

Glues and adhesives

(I recommend having all three of the following types of glues for different applications):

White glue or PVA (Pick one of the following):

- pH Neutral white glue or PVA
- Elmer's Glue-All Multipurpose Glue
- Elmer's Washable Clear School Glue

Super glue (cyanoacrylate glue):

- Gap filling (high-viscosity glue)
- Very low viscosity superglue

PaleoBOND (<https://paleobond.com/>) has a diverse line of glues. PaleoBOND adhesive is a cyanoacrylate, superglue. Each of their products are basically different viscosities reflected in the product name, PB100 has a viscosity of 100, PB750 has a viscosity of 750, and so on. I recommend the following:

- **PB100 "structural adhesive"**, a gap filling cyanoacrylate glue.:
<https://paleobond.com/product/pb100-structural-adhesive-1-oz/>
- **PB002 "Penetrant/stabilizer"** in combination with the **Activator** which accelerates curing (the activator actually causes any PaleoBOND product to cure instantly, which is handy):
<https://paleobond.com/product/pb002-penetrant-stabilizer-1-oz/> and
<https://paleobond.com/product/pb303-non-aerosol-activator-2-oz/>
- **Microtips** to facilitate placement of tiny drops of glue with precision:
<https://paleobond.com/product/microtips/> OR <https://paleobond.com/product/stiff-tip/>

Procedure for mounting tiny minerals or minerals with very smooth surfaces (personal communication with Bill Mason, founder of PaleoBOND and developer of its adhesives). Use an absolutely flat mounting surface, like the head of a sewing pin filed smooth. Practice positioning the mineral on the mount; once you stick the two pieces together they cannot be separated or repositioned. Place a drop of PB002-Penetrant/Stabilizer on the mineral and spray the Activator on the mounting surface. Stick the two parts together and hold for 10-15 seconds.

Mineral Tack

Mineral tack is a putty that is good for temporarily holding or positioning mineral. Many people use mineral tack for permanent mounts. If you choose this method, be aware that over time the putty loses its holding strength and the mineral may become loose in the box. Nonetheless it is a great method and I use it frequently.

CR Scientific – <http://www.crscientific.com/mineraltack.html>

Shannon & Sons – <https://shannonsminerals.com/shop/shannonsminerals/dosen-faltschachteln/terostat-befestigungskitt/geo-tac-geotac-mineral-tac-mineral-mounting-putty-terostat-75-g-pack.html>

Paint

Flat black enamel model paint – Model Master or Testors (I prefer Model Masters)

White enamel model paint – Model Master or Testors (I prefer Model Masters)

Brush Cleaner - Same brands

Model paint brushes – medium and fine

Labels:

Adhesive office labels or acid-free paper

Adhesive labels – Self-adhesive

Paper – Use PVA glue to adhere to the box

Seal either of these with a dilute (1:1) PVA glue and water. Other wise the labels will fall off after several years.

Miscellaneous doodads for mounting

Corks

Toothpicks

Balsa wood

Hair or tooth brush bristles

Sewing pins

Get creative

Tools – Splitters and Trimmers:

Diamond trim saw – 6-inch or 4-inch

The Zuber hydraulic splitter is the gold standard for medium rock splitters. The only supplier of new Zuber splitters is Shannon & Sons – <https://shannonsminerals.com/shop/shannonsminerals/werkzeug-zubehor/steinspaltgerate/usa-zuber-specimen-trimmer-mp-5-rock-trimmer-mp5.html>

Absolute Clarity & Calibration – They used to sell a small rock splitter, but now only have a larger one: <https://absoluteclarity.com/collectors/precision-splitters/>

Many micromounters have found machinists who can make manual splitters.

Diagonal wire cutters

End nippers, hoof nippers

Tools - Miscellaneous hand tools:

Fine tooth saw (and miter box)

Razor knife (Xacto)

Tweezers, an assortment of good Tweezers – one pointed, one fine point, one curved tip (optional)

Locking tweezers

Third hand jig

Nail file or emery board

Emery paper

Pin vise

Other:

Tissue or paper towels