

Aquazol 200 / Aquazol 500 Tissue

Materials and Tools:

- Aquazol 200 or Aquazol 500
- DI water
- silicone release Mylar
- kozo tissue, 5-9 gsm
- 3" Hake brush

Prepare adhesive mixture:

Aquazol comes as white to yellow chunks of crystal. It dissolves in water, but slowly. Aquazol 500 is a larger molecule and produces a more viscous solution in water than Aquazol 200 at the same proportion. A 10% solution of Aquazol 200 and a 5% solution of Aquazol 500 were both found to produce a good precoated tissue for mending paper.

-- Aquazol 200, 10% (w/v) solution in water: Place 10 g of the crystals into ~60 mL of deionized water.

-- Aquazol 500, 5% (w/v) solution in water: Place 5 g of the crystals into ~60 mL of deionized water.

Allow to dissolve and then increase the volume of water until the total volume of the solution is 100 mL. Agitation helps, but it is best to prepare the solution a day or two before preparing the tissue.

Precoating:

Precut tissue to be 2" smaller than silicone release Mylar. Label with formula, tissue, and date made. Work on a dark surface. Lay tissue on silicone release Mylar and gently brush adhesive mixture through the tissue with the "Union Jack pattern" followed by parallel stripes. Let dry thoroughly.

The silicone release Mylar is reusable if excess adhesive is cleaned up with blotter while it is still wet. Tissue can be stored on the silicone release Mylar until ready to use, or removed and stored between sheets of silicone release paper.

Applying with heat:

Cut out pieces with scissors or a scalpel. Apply the tissue to the tear adhesive side down. Lightly touch the tissue with the bare iron to position and secure it. Place silicone release paper over the mend. Apply heat for about 5 seconds, through silicone release paper, using a tacking iron set to about 95°C. Set under weight, such as a small plexiglass square, until cool.

Applying with ethanol:

Saturate a 3"x5" piece of thick blotter with ethanol and place in a polyester sleeve. Cut piece of coated tissue for mend. Pick up tissue with tweezers, lift cover of polyester sleeve, and gently touch the adhesive side of tissue to blotter. Quickly close the polyester cover over the tissue and gently apply pressure over length of mend. Remove tissue from ethanol/blotter packet. Using too much solvent washes the adhesive away. Apply the tissue to the tear adhesive side down. Place polyester webbing on top of the mend and press with Teflon folder. Let dry under blotter and weight.