

Preservation and Care of Philatelic Materials

Subsidiary Page 13 Adhesives

Many collectors, for reasons of convenience, have used commercially available adhesives to repair covers. Unfortunately, many of these adhesives are chemically unstable and in time disfigure the covers.

The preferred substance for use with paper, when repairing or reattaching paper to paper, is wheat starch paste. It makes a strong, smooth white adhesive that remains tacky even when diluted to a thin consistency. Wheat starch paste has been used for generations by oriental conservators. Here is the recipe.

Making Starch Paste

Materials needed:

- Aytex-P, an unmodified purified wheat starch containing 90% starch and 10% moisture. Available from Technical Library Services, 213 West 35th Street, 9th Floor, New York, NY.
- Fine mesh screen container or blender.
- Pyrex graduated beaker, 500 ml capacity.
- Distilled water.
- Saucepan, 2-3 liter size.
- Small spoon that can be inserted into the beaker.
- Hot plate.
- Small scale.
- Glass or plastic containers for storage.

Directions:

1. Weigh out 30 grams of wheat starch. Thirty grams will measure to the 50 ml line on a graduated beaker. Put into glass.
2. Measure 300 ml of distilled water. Gradually pour 50 ml of this water into the glass containing the starch, stirring continuously until all the lumps are dissolved. Cover the mixture and let it stand.
3. Bring the 250 ml of distilled water in the beaker to a boil by placing the beaker in the saucepan, surrounded by water.
4. Stir the starch and water mixture and pour into the boiling water in the beaker, about 25 ml at a time. Continue cooking and stirring for five minutes.
5. Remove beaker and allow to cool. If paste is too thick at room temperature, add distilled water. If lumps occur, force through the screen or blend in a blender.
6. Store paste in a container in the refrigerator. Paste will be good for about 10 days.

To mend a torn cover, use Japanese tissue paper and wheat starch paste. The tissue is used under the tear on the inside of the cover.

Special formulated adhesives such as ethyl hydroxyethyl cellulose, neutral polyvinyl acetate, polyvinyl alcohol, and methyl cellulose suitable for conservation purposes are available from archival suppliers. These adhesives have been chemically stabilized and should not be confused with commercial products.

The United States Postal Service advises that the following adhesives were used on U. S. postage stamps:

Gum Arabic	from 1860's to 1890
Dextrin	from about 1890 to 1970's
Polyvinyl Alcohol	from 1970 to the present
Polyvinyl Acetate	after 1971

At times, silicates and vegetable gums are added to modify certain characteristics of the gum. This was done to overcome tackiness and to obtain durability.

The Preservation and Care of Philatelic Materials Committee has asked the United States Postal Service to identify the solvents in the adhesives used on the various self-adhesive stamps issued by the United States Postal Service. The postal authorities responded that their specifications neither tests for nor recommends any particular solvents to remove the adhesive since that is not considered part of the stamp performance requirements specified by USPS. Thus, the committee was unsuccessful in obtaining the solvent information requested, but we are continuing to pursue that information.