



Gluing with Paste

Simple to make, nontoxic and reversible

by Keith Davis

Adhesives lining woodshop shelves range from traditional animal-hide glue to modern epoxies. But there's one adhesive that gets scant attention: flour-based paste, a material that has bound books for centuries and will adhere leather and felt to fine furniture.

Paste can be just a blend of white flour and water. But if you combine flour, alum and water (see the photo above) and cook it, you'll get a paste that has several unique characteristics:

- It is reversible and removable.
- It sets up and dries slowly, so you have plenty of working time.
- It soaks into many materials, softening and filling pores.
- It contains no hazardous solvents and is nontoxic.

Paste won't edge-glue boards, but it has no equal for sticking labels on wooden storage boxes, lining drawers with paper, covering the interior of a jewelry chest with felt or adding a leather surface to a writing desk.

Basic cooked paste

Ask 10 paste users how to make paste, and you'll likely get as many answers. Some add sugar to the mixture, so it will keep for several weeks in the refrigerator. Wallpaper can be hung with a simple wheat paste that's made cold. Other recipes call for rice flour, which makes a light-colored paste. And laundry starch can make an especially tough paste. I usually use the basic cooked-paste recipe shown in the box at right.

Tips for smooth paste

Materials stretch with paste, which can be a curse and a blessing. Papers stretched

when still wet with paste often will shrink and buckle when they dry. But stretching can be helpful when you want paper to conform to contours and leather to be formed into irregular shapes.

To apply paste, I use an inexpensive bristle brush with the bristles cut off about half length. Use single, one-way strokes of the brush to minimize stretching. If you're gluing porous materials like leather, coat both surfaces, and leave them wet-side up for several minutes. Wipe off any excess globs, and apply a thin second coat of paste. Again, wait a few minutes. Paste the two materials together, pressing down evenly. Extremely thin leathers or pigskin may weep paste when pressed down. Wipe off any squeeze-out with a dampened cloth or paper towel.

Labels and thin covers glued with paste must be rubbed down well. I cover the label with plain paper and use a stick of hardwood

or a bone folder (a small book-making tool made for folding and pressing paper) to rub out the label. Then I lift off the paper and throw it away. If you have lots of pasting to do, such as drawer labels, you can brush the paste onto a piece of glass, place labels on the paste and lift them from the glass with a knife point.

If you're lining drawers with felt or velveteen, use a stiff batch of paste so it doesn't bleed through. Mix the paste with a few less tablespoons of water, and apply the paste to the wood only. Press the precut material in place, and smooth it using a print roller, a dull straightedge or an old credit card. □

Keith Davis repairs musical instruments in Iron River, Mich.

RECIPE FOR PASTE

This recipe yields about 1 cup of paste.

1/4 cup white flour

1/16 tsp. kitchen-grade alum (to prevent spoilage)

1 cup cold water

Combine the flour and the alum. Add 1/4-cup water, and stir well to eliminate lumps. Add about 3/4-cup water, and stir well with a wire whisk. Bring the mixture to a boil over medium-high heat. Boil for one minute, constantly stirring the paste. The mixture may thicken when cooled, but you easily can thin it as needed with tap water.