Back to the Basics: Surface Cleaning of Paper

Sara Holmes
National Archives at St. Louis, sara.holmes@nara.gov

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Surface cleaning of paper is a treatment to remove dirt and contaminants from paper. When properly executed, this can be completed by archival staff and even volunteers. Unfortunately, when improper methods are used, or items to be treated are poorly selected, surface cleaning can have disastrous consequences.

The appearance of some items can be improved by performing surface cleaning. Dirt and contaminants that will degrade paper over time or could transfer to other papers when handled and stored may be removed.

If undertaking surface cleaning, be sure you know how to assess risks of damage to both the paper supports as well as to ink, pencil, and other media. Some papers may be too fragile, such as brittle pages or “pulpy” documents damaged by water or mold. While most inks are safe for surface cleaning, pencil, charcoal, and pastel can be permanently damaged. Hand-colored areas can be altered and should not be cleaned. Do not attempt to surface clean photographs or items with glossy surfaces. These are best handled by conservators.

Don’t assume you can identify items that should not be surface cleaned by eye only. Checking under magnification for flaking media can identify some high-risk items that should only be handled by conservators. But be sure to test an unobtrusive area first and train anyone who completes surface cleaning to do the same. Make sure the color is not lightened and that the ink or other media does not smudge.

Preparing to Surface Clean

Work on a clean surface. Be sure the surface is flat and there is plenty of room to work. Clean blotter is a good work surface, but paper can also be used. You will find it works best to use a piece of blotter or paper that is larger than the item you are working on. Replace the paper or blotter as it becomes dirty. Never overclean a document. On some items, dirt will be ingrained among the paper’s fibers and will not come off entirely. Be sure that anyone working under your direction understands that the goal is to remove loose and easily removed dirt. Not all documents can be improved or fully cleaned.

You will also need some soft brushes. Hake brushes, which can be found in varying widths, work very well to clear eraser crumbs and loose dirt from the surface. Other brushes can also be used. If using brushes with documents that are mold contaminated, do not reuse the brush on documents without mold, or else you may introduce mold to other papers.

Types of Erasers

A variety of erasers can be used, but be sure they are recommended for use in surface cleaning and that you know their content. Some erasing products are too abrasive for archival use. Even some products marketed as preservation treatments should be carefully considered before using.

Block Erasers. Look for noncolored Magic Rub (Eberhard-Faber) or Staedtler Mars plastic erasers. The blocks can be used directly for surface cleaning, but a light and controlled hand is needed to do so safely without tearing paper. (Never use hard, pink erasers. These are strongly abrasive and will damage the paper fibers.) To clean, move in a circular motion, completing one small area at a time. Moving in a line or with large motions can lead to a streaky appearance when removing heavy soil. When cleaning along tears, move in the same direction as the tear. When at the edge of the page move in a single direction from the document off onto the work surface, then lift the eraser from the surface. Block erasers should only be used on stable documents with undamaged surfaces. Only those with a light touch and experienced in surface cleaning should use block erasers on thinner papers.
Sponge Erasers. These erasers are a vulcanized natural rubber and were originally marketed for soot removal. They are soft and foamed, and easily handled by a novice. They are increasingly becoming the first choice for surface cleaning in many labs. These erasers come in bricks, but can be cut into smaller squares. (The smaller thicknesses can be cut more easily.) Cutting into pieces allows a better grip as well as more surface area to remove the dirt. Use short movements, and work from the center of the page out. When cleaning torn areas, move in the direction of the tear. As the surface of the eraser gets dirty, trim off the edge or discard. Clean loose dirt and eraser debris from the surface with a soft brush. These erasers are available from conservation suppliers, but you can also purchase them from cleaning suppliers such as JonDon.com in bulk. Be sure to look for listings for “soot cleaning sponge” or “wallpaper cleaner.” Do not purchase those listed as chemical sponges—these have undesirable additives to use on paper. Store sponges out of light or they will deteriorate rapidly.

Document Cleaning Pads. These are cloth bags with eraser crumbs that leak out of the weave of the cloth. They have long been marketed for use in archives and at home. However, residue from the eraser crumbs becomes trapped in paper fibers, even after gentle brushing, and can be chemically unstable and abrasive. Instructions on some boxes state that the pads can be used on moldy paper—and that the pads are reusable. Should you choose to use these pads on paper with mold, please be aware that you may transfer mold to other items if reused and that even dormant mold can become active again!
Ground Eraser Crumbs. Be cautious of which type of eraser you are purchasing if you go this route. Several compounds are available and marketed for use by graphic artists and are too abrasive for safe use. Look for ground vinyl block eraser suppliers, such as Book Makers and Museum Services Corporation, which will specify the use of Staedtler Mars or Magic Rub (Eberhard-Faber) erasers. Grinds come in different grades, from coarse to fine. When cleaning, you will want to progress from a coarser grade to a finer grade, so plan on buying multiple grades of grind. Be sure you have a variety of brushes on hand if using crumbs. You will need soft brushes, such as hake brushes, to clear the surface of the cleaned paper, and you will also want larger drafting brushes to clean your work surface. To begin, pour a small amount in an unobtrusive area to test. Roll the crumbs with your fingers in a circular motion. If the cleaning does not alter the medium, complete the entire item. Crumbs should be brushed away when dirty and replaced with clean grindings until the cleaning is complete.

Crepe Erasers (or Rubber Pick-ups). These are very hard squares of rubber that can be used to remove adhesive residues. While it is not advisable to remove tape carriers, oozing residues and sticky deposits on the surface of paper can be removed. These should only be used with caution and careful handling. Gently rub the adhesive with short strokes. This can take a long time, but should not be rushed. You will need to pick the adhesive off of the crepe eraser with your fingers after it is pulled off of the paper. Although crepe erasers can effectively remove sticky residues, adhesives can strongly resist removal, which may lead inexperienced handlers to damage the paper. Placing pages with sticky residues in polyester sleeves can be a simpler alternative.