CONSERVATION CENTER
for art & historic artifacts

CCAHA specializes in the treatment of art and historic artifacts on paper and provides preservation education, training, and consultation. Established in 1977, CCAHA is the largest nonprofit conservation lab in the country.

SELECTING STORAGE MATERIALS[1]

As stewards of collections, archivists, collections managers, curators, and librarians are often faced with making difficult decisions regarding appropriate storage materials for the important historical and artistic materials under their care. It is essential that collections staff be educated consumers and choose storage materials that properly house and support collections and don't cause damage or hasten deterioration. However, navigating a museum or archival supply catalog can be difficult. To further complicate decision making, many materials marked "archival" or "acid-free" available through catalogs or in office supply and craft stores may not necessarily be appropriate for collections storage.

Compiled below is a list of materials that are acceptable for the storage of collections. The list is not exhaustive, but is a good starting point for selecting storage materials. Note that many of these materials may be marketed under different product or trade names. When choosing products, if the material-type is unclear or if you have questions about its suitability for use with your collections, contact the manufacturer and/or a conservator.

PLASTICS

Not all plastics are suitable for use with collections. However, stable plastic materials that do not off-gas can be an ideal material for safely housing collections materials, easing handling, and providing support. Bags, containers, boxes, and sheeting made of appropriate types of plastics all have useful applications in the museum, library, or archive setting.

Material Type	Materials Notes
Polyethylene	Used to make storage bags, enclosures, and foams. Sometimes marketed under the brand names of Volara®, Ethafoam®, Trirod®, or Tyvek®.
Polyester	Available in sheets, bags, or enclosures. Sometimes marketed under the brand names Melinex® or Mylar®. Sheets are sold under the brand name Remay®.
Polypropylene	Used to make boxes, bags, and enclosures. Corrugated polypropylene boards are manufactured under the brand name Coroplast Archival®.

[1] This leaflet has been adapted, with permission, from the handout "Locally Available Storage Materials", written by Julia Clark, Curator of Collections at the Abbe Museum.

Fabrics and Padding Materials

When selecting fabrics or padding materials, it is best to opt for undyed and sizing-free materials. Fabrics and padding materials can be used in creating custom storage solutions for textiles and to support objects within boxes.

Material Type	Materials Notes
Unsized and undyed cotton or muslin	Can be purchased at any fabric supply store and can be used for storage enclosures, padding, and in exhibition cases. Fabrics should be washed with a phosphate-free detergent before coming in contact with collections.
Non-medical grade Stockinet®	Sold in museum and archival catalogs or from medical suppliers. Good for stuffing to create padding within boxes or for covering exhibit mounts.
Un-fused polyester batting	Available in fabric and craft supply stores. Useful as a stuffing material when creating padding and supports for collections.
Flexible extruded polyethylene or polystyrene foam	Available at craft supply stores and through archival catalogs. Can be used to make supports within boxes and to support collections with round bases (baskets, pots) on shelves.

Materials for Securing Collections

Collections materials will sometimes need to be secured within boxes or cases. It is imperative that flexible and non-abrasive materials be used when securing collections.

Material Type	Materials Notes
Cotton twill tape	Sold in various lengths and widths.
Undyed cotton string	Sold in fabric and craft supply stores.
Monofilament	Also sold as fishing line. If used in direct contact with objects other than hard metals and glass, padding should be placed between the object and the monofilament or it could cause object damage.
Polyester or polyethylene straps	Strips can be cut and used as straps to secure objects and books to mounts.

Adhesives

Adhesives, even those marketed as “archival,” should never be placed in direct contact with collections. Some tapes and glues can be used to make enclosures. Before utilizing a new adhesive contact a conservator.

Material Type	Materials Notes
3M double stick tape	Sold in various widths for multiple applications. Can be used to make boxes and enclosures.
Hot glue, clear	Useful for making boxes and acid-free cardboard enclosures.

PAPERS

Papers and paperboards are used to make boxes, folders, support boards, and are also used as interleaving materials. These materials are marketed under several brand names. For museum, library, and archive collections, collections managers should look for paper materials that are marketed as both acid-free and lignin-free. Below are key terms to look for when purchasing paper products for collections storage. If you are unsure what papers would be best for your particular collections application, contact a conservator.

Paper Terminology	Notes
Acid-free	Papers marked as acid-free are pH neutral or slightly alkaline at the time of manufacture. Many papers marketed as acid-free are made from wood pulp and will become acidic over time.
Lignin-free	Lignin is a material found in wood pulp and is one factor that causes yellowing and brittleness in paper over time. Lignin can be removed in the paper-making process, making the paper more suitable for collections storage applications.
Buffered	Buffered papers include an additive, usually calcium carbonate, to make the paper slightly alkaline. Buffering the paper assists in neutralizing acids that may form. Buffered papers are appropriate for most storage applications but should not be put into direct contact with blueprints, cyanotypes, silver and other metals, textiles, and animal-derived materials (silk, horn, bone etc.)
Unbuffered	Unbuffered papers are pH neutral and do not contain any buffering agent. These papers are less effective at absorbing acids produced by the environment or objects. Appropriate for use in instances (listed above) where more alkaline papers might cause collections damage.
Zeolites	Zeolites are molecular sieves that are imbedded into paper or paperboard. Zeolites trap gaseous pollutants either present in the environment or those produced by the deterioration of the artifact. Testing has shown that paper artifacts and photographic prints enclosed in papers containing zeolites are provided additional protection. Sometimes sold under the brand name Micro-Chamber®. Micro-Chamber® products are buffered.
Photographic Activity Test (PAT)	Any papers or enclosures being used to store photographic materials should pass the Photographic Activity Test or PAT. The PAT is a predictive test of reaction between an enclosure material and photographic material. Plastic enclosures for photographs must also pass the PAT.