

Be Informed

The more you know and the more questions you ask is what will determine if you are supplying safe long lasting products to your customers. Ask your suppliers the hard questions and expect an answer. Your reputation and your customers satisfaction are depending on the answers.

Definitions to important terms:

Acid Free – a term used widely in the paper industry to describe paper that has not had acid used in its manufacture and has had base added to obtain a pH of 7 or above. Acid containing papers have been shown to have shorter life spans than those papers that are acid free. The term acid free has begun to be used for a wide variety of other materials including items such as adhesives, films, inks, etc. It has been implied that acid free indicates that these materials are also long aging, non-damaging, and photo safe simply due to being acid free. This is not necessarily the case. Simply because a material is acid free does not mean it is photo safe or that it is long aging.

Bleed – The migration of ink or adhesive through or across the surface of the material to which it has been applied. This applies to either bleed immediately upon application or over a long time.

Oozing – When an adhesive seeps out from under the edge of the item to which it was applied. With a wet adhesive, oozing can occur before it has dried; with a dry adhesive, oozing can occur over time such as with tapes or stickers where the adhesive seeps out from around the edges.

Out-gassing – The gaseous emission of pollutants from solids or liquids. An example of this is the gaseous emissions from vinyl binders that result in a strong odor. It is the method by which most harmful components of scrapbooks reach photographs.

Photographic Activity Test (PAT) – The most common and reliable test used to predict harmful chemical interactions between scrapbooking materials and photographic images.

Scrapbook Implications: This is one of several tests used to determine if a material is safe for use with photographs. A pass result in the PAT is not necessarily an indication that material is completely photo-safe. PAT does not equal “archival”. Other tests, such as pH, may be needed.

Photo-safe – Although a photographic activity test exists, it only takes into account some of the possible chemical interactions that can occur with photographic materials. There is currently no standard definition or set of test methods that fully encompass this term. It is often used in advertising to imply a product’s non-reactivity with photographic images; however, the basis for such a claim is unclear.



SCRAPBOOK PRESERVATION SOCIETY

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**QUICK GUIDE TO
COMMON
QUESTIONS ABOUT
ADHESIVES.**

SCRAPBOOK PRESERVATION SOCIETY

Mission -

The SPS mission is to collect, review, organize, and distribute science based preservation information to the scrapbook community through the publication of preservation guidelines, informational articles, and technical papers, and through the presentation of educational programs.

ScrapbookPreservationSociety.com

Adhesives

Just what is an adhesive?

Adhesive – a substance which causes two or more materials to bond. Adhesives may be activated by water, non-aqueous solvents, pressure, heat, or other agents. The action of bonding varies between the adhesive types and involves either a chemical and/or mechanical bonding to the surface. Adherence becomes difficult when the surface is so smooth that no mechanical bond can occur or so chemically nonreactive (inert) that no chemical bond is available.

Scrapbook Implications – Adhesives can affect the surfaces that they are applied to by causing staining, etching, corrosion, bleed-through, or fiber breakdown.

Common Types Of Adhesives –

Pressure Sensitive Adhesives (PSA)

This type of adhesive obtains its initial bond by the application of pressure and is usually supplied as single or double sided tapes or some type of transfer adhesive. These can include sticky putty and some waxes. They are usually made of acrylate or rubber based materials.

Water Based Adhesives

The most common example is white school glues, many of which are a casein based or polyvinyl acetate based adhesives. These types of adhesives are made from proteins or starches which include wheat or rice paste although many newer water based adhesives are available that are made from acrylates.

Solvent Based Adhesives

Solvent based adhesives are supplied in solvents other than water and include rubber and acrylate based materials. Common solvent based adhesives include rubber cement, modeling glue, and many spray adhesives. A good way of telling that an adhesive is solvent based is when the package says to use it in a well ventilated area.

Thermosetting & Reactive Resins

These are materials where a chemical reaction occurs to cause bonding. It's usually heat or additives that induce the reaction to crosslink & solidify the adhesives. Examples include two part epoxies, cyanoacrylates, etc.

Hot Melts

A hot melt requires heat to liquefy or soften the adhesive for application to items. These included polymeric waxes, polyethylene, polyethylene blends, rubber based, and acrylate based adhesives. For the crafter, polyethylene based is the most common and is normally made to be used in hot melt glue guns. The bond is normally mechanical in nature, but depending on additives can be both mechanical and chemical.

What could go wrong if I use the wrong adhesive?

Metals may corrode.
Paper may become brittle, discolor, or cockle.
Photos may discolor or fade.
Adhesive bonds can fail.

So, What Should I Use?????

Remember, no one product is right for everything.

Adhesives either chemically and/or mechanically bond to the surface of the item. The only way to know if the adhesive is safe for a particular use is to look to the manufacturers' recommendations on the package. Informational phone hot lines provided on many packages or Frequently Asked Questions areas (FAQ's) on websites are also good sources of information.

With the wide range of materials going into scrapbooks, adhesives need to be safe for many surfaces besides photos. Wood, paper, dyes, colorants, metals, paints, and an unbelievable array of materials are being used more frequently by creative scrapbookers.

In general, acrylates age better and more stable than rubber based adhesives. This is because rubber based adhesives are made by blending either a natural or synthetic rubber with a material called a tackifier. Because it's a blend, it's subject to separation. Think of salad dressing, you have to shake it before you use it. Different dressings will stay mixed for longer or shorter times, but sooner or later they will again separate. This is also true of rubber based adhesives.

Acrylates on the other hand are polymers designed on a molecular level to be adhesives. Unless the molecule is subjected to extremes (heat, light, etc) sufficient to break it down, it will always be the same molecule. Acrylic caulks and paints are acrylates. These are the products guaranteed to last fifty and more years on the outside of your home.

Both rubber based and acrylate adhesives are used in the production of tapes, liquid and transfer products. Depending on your purpose, you should always check to see which of these the product contains.

Adhesives made from natural occurring materials such as wheat or rice starch and proteins are subject to all of the problems associated with being natural materials. Often these are the materials of choice with professional conservators, because they can be reversed and removed with a simple application of water. A primary concern is that often these materials will support the growth of mold and mildew. When using any of these materials for scrapbooking make sure they contain some form of antimicrobial agent.

Because hot melts are often made from polyethylene, they are very well suited for the wide range of materials used in a scrapbook. The biggest concern is to make sure the items being adhered can handle the temperatures used for application. By their nature, polyethylene based hot melts are acid free as long

as no acid containing materials have been added during their manufacture. Regardless, you should still look to see if the hot melt is recommended as photo safe.

Thermosetting and reactive resins have very high bond strengths and a wide range of working times. A key issue is that because they are chemically reacting to create a bond, by products of the chemical reaction can affect the items being bonded and accidental bonding of the crafter can occur (i.e. skin). Consult the manufacturers' recommendations anytime you are using these types of adhesives or you may become a part of your scrapbook.

Planning & Preparation For Using Adhesives;

If the item is sensitive to liquids use a dry adhesive such as tapes or hot melts.

If the item is being mounted on a flexible page make sure that the adhesive will remain flexible too.

Cloth items normally contain dye for color so liquid adhesives may bleed the color.

Many ink jet printed items can have the print bleed if exposed to water.

Many plastics will dissolve when exposed to the solvents in some adhesives.

Metals will corrode when exposed to acids and moisture so use acid free.

To find out if you have a problem with any of these, check on a small area of the item to make sure damage won't occur.

Is the final product created the "keepsake" or the items being bonded?

If you are using a "one of a kind" heirloom or photo on your scrapbook page avoid truly permanent adhesives. Use an adhesive that is guaranteed reversible or removable.

On the other hand often what makes your scrapbook page special isn't just one individual item, but the time and thought you put into creating the page. The scrapbook itself is the heirloom the heirloom and you want it to last. The most important thing is the longevity of each page and not just one individual item. In this case you may want to consider using permanent adhesives.

Things To Look For On A Package.

Photo Safe

Acid Free, pH neutral, or Buffered

Permanent or Removable

Reversible

Non-Hardening

Archival and if so in what ways or how.

Disclaimers (These tell you what not to use the material on).

Knowledge Is Key

The more you know the longer your projects will last.

Use products you trust.

If you don't know ask.