Shrink Packaging Art

Complete information on this useful new technique for protection and display of art.

Written for the artist, photographer, picture framer, art publisher, gallery manager and anyone concerned with handling, storing, displaying and selling art on paper.

by

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Shrink Packaging Art

Introduction

Most artists are not content only to create art; they want to show their work to the public, and they want people to buy it. The most practical, simple and inexpensive way for an artist to make his or her work accesible to the public in a format which is attractive , protected from dirt and damage and highly saleable is to shrink package it.
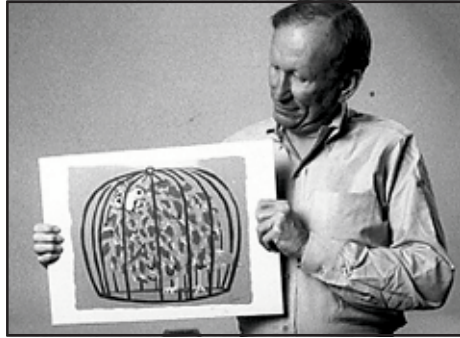
With the recent advent of inexpensive portable equipment designed for use in artist's studio or home, every practicing artist, whether fine or commercial, amateur or professional can now get the benfits of this technique by doing it themselves.

This booklet will tell you how shrink packaging is used, and what kind of equipment and materials are available. It will also describe in some detail how you can do it to protect, display and sell your won art.

Shrink Packaging Art

History And Background Of Shrink Packaging

Shrink packaging was developed after World War II by American engineers looking for improved ways to protect food and other products. The major credit for the development of shrink films in this country belongs to Dewey & Almy Inc. of Cambridge, Massachusetts, a small manufacturer of specialty plastic films. Although all plastic films shrink slightly on heating, they were the first to develop a commercial product based on amplification of this effect.

The technique was applied to artwork by the late 60s. At this time, commercial shrink wrapping equipment was used, but the technique of backing the art work with a flat rigid-board, sealing the shrink film around the periphery, and then shrinking the filmwith hot air was quickly established. The technique was a direct application of commercial packaging, as practiced in high production factories throughout the world.

In the sixties, just as in previous decades, the standard way to protect original art on paper was to fold transparent cellulose acetate sheet around the art with its board backing, and tape it to the back.

The author developed the first sealers designed specifically for art use in 1972. These devices included both hinged and hand-held sealers between 30 and 42 inches in length. Shrinking the film was accomplished with a small hot air gun, similar in design to a hair-dryer, but higher in temperature.

These new shrink packagers were made and sold by Product Planning & Development Inc. of Boston. Although less expensive for than the cheapest commercial units, they were still too expensive for most artists. The did, however, meet the needs of many art galleries and picture framers.

SHRINK PACKAGING ART

Recently a new type of seal;er has been developed called the Mini-Wrap, which is both simple and inexpensive. Instead of the red hot wire, this device uses a Teflon coated bar to make the seal. Because of its low cost and compact size, and because it seals without smoke or fumes. the Mini-Wrap is the device most often chosen by artists.

Mini-Wrap Shrink Packager

SHRINK FILMS

Several other companies offered shrink packagers of their own during the late seventies and eighties, and different types of shrink film became available to the art and framing market. One approach was to use a self-clinging film, similar to Saran Wrap (polyvinylidene chloride), which does not require a sealer. A hot plate, iron or heated roller is used to bond the film where it overlaps. In general, this type of film stretches too easily and therefore does not perform well in protecting art.

Heat-sealable shrink films come in several types. Polyvinyl chloride, or PVC, is one type which is easy to handle and seal. It is tough, clear, and is available in a range of guages (thicknesses) in center-folded rolls up to 36 inches wide. A major drawback of PVC shrink film is the plasticizer it contains. Plasticizers are liquid chemicals added to the film when it is processed, to make it flexible. The plasticizer makes PVC shrink films slightly tacky, and can migrate into paper art if left in contact with it over time. Another problem with PVC is caused by the sealer. Until recently, all sealers for shrink film did their work with a wire heated to red heat and pressed against the double thickness of film. PVC leaves a residue on the wire each time it

SHRINK PACKAGING ART

is sealed. The residue eventually interferes with proper sealing. The remedy is to cover the entire sealer, hot wire and all, with a glass cloth sleeve impregnated with Teflon. The sleeve keeps the wire clean, but requires occasional replacement.

The best and the most widely used shrink film for use with original art is polyolefin. This material is a family of plastic resins consisting of polyethylene, polypropylene and a number of co-polymers and mixtures of the two. Within last decade, high performance films which are actually multiple layers of polyolefins of varying properties, selected for maximum performance in combination have been developed. For example, an easy-sealing layer might be placed on the outside, while a high-strength layer forms the center.

As a result of such clever developments, we now have available shrink films which are optically very clear and non-distorting, as well as tough and long-lasting. They seal easily, with minimum puckering, and are easy to separate when sliding the art work between the two layers. Polyolefins are very inert, which means they do not react, and therefore are safe for use in contact with valuable original art.

Shrink films are available in common thicknesses of 50 guage (.0005 inches), 60 guage, 75, 100, 125 and 150 guage. For art purposes, 100 guage is the best and most versatile. The lighter guages are of course cheaper, but they are flimsier and harder to handle, since the electrostatic effects are more pronounced.

As shrink film for art becomes more commonly available, some merchants, intent on being competitive, offer the lighter guages only, without explaining the drawbacks. The heavier guages of 125 and 150 are no longer necessary, given the improvements in shrink film technology, which have given us excellent toughness in 100 guage material.

Shrink Packaging Art

There is one reason for using the heavier guages , and that has to do with appearance more than protection. We will discuss it in the last section.

How To Shrink Package Art

Three steps are necessary for shrink packaging paper art (water colors, prints, drawings and the like). It is essential of course, to have a good solid work surface to work on, with good light.

First, one must cut the backing board to size. Second, the art and backing are sealed in the shrink film. Finally, the film is shrunk tight and smooth with heat.

Preparing Backing

The most commonly used board is foamboard, which is made of Styrofoam sandwiched between two sheets of kraft paper. The most frequently used thicknesses are 1/8 inch and 3/16 inch. 3/8 and 1/2 inch thick board is also used. The larger the art, the thicker the board required to maintain flatness, although one must never expect any unsupported paper product, like foamboard to remain perfectly flat over time. 3/16 thick is usually satisfactory for average purposes up to about 30 inches by 40 inches, provided the board is flat to begin with. Remember that the film will exert a compressive force when it shrinks, and this will tend to bow a board which is already warped. Put the art against the convex side, if you must make a choice.

Cut the board neatly, with perfectly straight edges. Be sure to use an absolutely sharp blade on a smooth, clean cutting surface. A standard hand mat knife, preferably with a fixed, rather than adjust-able blade will work well, when used with a heavy steel or aluminum straight edge, the heavier the better. Keep the straight edge absolutely motionless with one hand as you slide the knife along it with the

other hand, starting at the board edge farthest from you. If you have to repeat the cut to cut all the way through the board, do not let the straight edge move or you will end up with a crooked cut. If the cut must be longer than the straight edge, leave the knife in the foamboard and slide the straight edge, making sure it is still touching the knife and is in line with the previous cut when you continue the cut. A little practice is very helpful in learning to make straight, even cuts.

Wall-mounted cutters, or table mounted ones, make beautiful straight cuts, but they are expensive. If you use one, follow the maker's instructions. Shear-type paper cutters do not work on boards as thick and crushable as foamboard.

There are several ways to obtain the proper sized backing for a particular piece of art. The right way depends in part on how fussy you are, and also how experienced. The easiest method when beginning is to lay the art work flat on the board and make marks 1/8 inch out from each edge, in pencil, so they can be later erased. Be sure to make at least two marks for each edge, preferably one at each corner. Then remove the art, line up the straight edge on the marks, and cut. Repeat for all four sides.

The 1/8 inch border is important to prevent the shrink film from pushing the art inward from the edge of the board, which will cause the art to buckle. With experience you can reduce the border to nearly zero if you wish, depending on the type of paper. Of course, borders may be wider, if you choose.

Art work may also be matted, or mounted, or both, before shrink packaging. Just be sure the mat is smaller than the backing board to avoid buckling the mat. A narrow mat can also cause buckling problems, particularly if it is large.

Some paper art may tend to slide out of position within the shrink film, particularly when freshly done when there is still an excess of air

Shrink Packaging Art

in the package, and when a large border is used. The remedy is a slight touch of adhesive or double faced tape in the center or along the top edge of the art. If adhesive is to be avoided for archival preservation reasons, then you should minimize the border. After the air has dissipated through the shrink film, usually in an hour or two, the art may be slid into proper position by gently tapping the board against the table.

Why Shrink Package Art?

There are two basic reasons for shrink packaging art: protection and presentation. If all that is required is temporary protection against dirt, handling and physical damage, then there is little reason to be fussy. A great deal of inexpensive art is placed in browser bins in galleries, where protection and access are the major requirements. All paper-based art can be safely shown to the public and also easily stored or shipped when shrink packaged. The vast majority of art galleries will only accept art either framed or shrink packaged.

Usually we wish to show the art, and then it becomes important to take extra pains. As in most cases where visual appearance in important, one can go from simple to complex treatments, and some of these will be described in the next section. Before that, let us continue the basic process.

Sealing

With the backing cut to size and all marks removed, as well as any loose dirt, we now slide the art and backing between the two thicknesses of shrink film, as it is pulled out from the roll. Some shrink packagers have a film separator bar attached to the film dispenser to hold the two sheets apart. If yours does not have one, keep a straight

piece of wood or metal between the two sheets. Some shrink films are hard to separate, particularly when you get to the inside of the roll, and in very dry weather, when static cling intensifies the problem. Two pieces of adhesive tape will help to separate the two sheets to start.

Push the art and backing all the way inside, until they rest against the fold of the film. They should also be against the seal on the left side of the art. This seal was made the last time the film was used to enclose something, (remember that the sealer makes two parallel seals, separated between, each time it is used.)

If the roll of film has not been used yet, you must start by making the first seal, before inserting the art and backing, and discarding the scrap film to the left of the seal. Do not worry about scrap. You will always generate scrap including mistakes. The cost to you and to the environment is very tiny, compared with the cost of board and your time sealing the film.

With the art and backing in the top left corner of the film, now make the right edge seal. Be sure the silicone pad is in place underneath the sealing area. Pull out any pleats or wrinkles in the film. Leave 1/2 inch to one inch of slack beyond the edge of the backing board. Bring the

Sealing the film.

sealer into position above the line where you intend to seal. Be sure the sealer bar extends at least an inch beyond the folded edge of film now press it down firmly and hold it for two to four seconds, without moving. Now lift, and quickly separate the film on the right from the enclosed art on the left.

The trick is to separate, without stressing the seal while it is still hot, and therefore soft. Actually, this is quite easy to do, if the work surface is perfectly flat, good sealing pressure is applied, then released quickly, and if the best quality shrink film is used. In that case, the

film will separate without any tearing necessary, only a slight motion to keep the two sides apart so they don't stick together while still hot.

A second technique may be used to separate the two sides, if they don't separate by themselves when the sealer is lifted: keep the sealer pressed down with firm pressure for three to four seconds. Reach up with the free hand and grasp the top (folded) edge on the right of the sealer. Pull it gently up and to the right, while holding the sealer down lift up the sealer after the film has been separated along the entire length of the sealer. This should take no more than three or four seconds after the initial sealing time.

If the first seal is not long enough to seal the entire width of the film, you must now repeat the seal in a straight line one or more times. Smooth out pleats and wrinkles in the film as neatly as possible. Position the sealer above the line. Press it down, seal, and separate as before. Be careful to continue the seal in an accurately continuing straight line, without creating gaps or angles.

When you have sealed the entire width, turn the art and backing, with its film covering, now completely cut off from the roll, ninety degrees (one quarter turn). Position it to seal the last edge. Make the seal exactly as you have done before. Discard the scrap. If the scrap piece is large enough, you may save it for packaging other items.

Shrinking The Film

You are now ready to shrink the film. Turn the piece over, with the art work facing down. If the art is not tacked down, be sure it is positioned properly on the board, before shrinking.

Using the Milwaukee Model 1220 heat gun, switch the gun on to "low". Hold the nozzle 12 to 15 inches from the back at first, and move it from side to side to prevent the hot air stream from concentrating on one spot. Start in the center of the piece, and when the film begins to shrink, move around to the outside. It helps to have a low -

angled source of light, such as sun through a window or a table lamp positioned in front of you. You will want to see the reflections from the film in order to find and eliminate the wrinkles while shrinking the film with heat gun.

Do not try to shrink all the wrinkles from the comers in the back since they prevent the stresses from concentrating, and that is where tears are most likely to occur. As you gain proficiency, you can move the heat gun closer to the work to speed up the shrinking process, but increased speed means increased

Shrinking the film with heat gun.

danger of melting a hole or making a blush mark, and then you will have to start over.

Shrinking the back first pulls the seams to the back, which is where you want them. When the back is done, turn the work over and carefully shrink the front. This will go quickly, since most of the slack has been taken up in the back. Most people prefer to do the edges first, then the center, but this is really a matter of individual preference.

HANGING The ART

You may wish to add an adhesive hanger to the back, in order to hang your shrink packaged art from a wall hook. The best type of hanger is made of flat plastic, with a saw-tooth edge to engage the wall hook or nail which prevents the hanger from sliding sideways, yet allows balancing of the hanging art so it will hang straight. The hanger should be heavy guage, and the adhesive should be the foam type, which holds on to the shrink film much better than the flat adhesive.

Shrink Packaging Art

This type of hanger will last for years, and will not damage the front of adjacent pieces in storage or in browsing bins.

The use of the adhesive hanger is another reason to avoid very light guage shrink film, or low quality film, since these will more easily stretch or peel away from the hanger. Better quality films offer other advantages, including high clarity, improved toughness, reduced sticking together and reduced puckering when the seal is made.

Beyond The Basics

Once you have learned the simple techniques for protecting art work described above, you may be interested in more decorative presentations using shrink packaging.

You can try using a thicker board with a tape covered edge for a more elegant appearance. Half inch foamboard may be used, or several thicknesses of lighter board may be sandwiched together. It is nearly impossible to match two pieces after they are cut, so put them together with liquid adhesive, spray, or double faced tape before cutting to final size. Cut the board with a border 1/8 inch larger than the art all around.

You will need colored adhesive tape to cover the edge. The tape should be at least one inch wide, preferably made of paper. Heavier plastic strips, either flat or L-shaped in cross section are also available for covering the board edge. Cover the complete edge of the board, wrapping the tape to cover at least one inch of the front of the board in from the edge. Fold the corners neatly, or cut the tape and overlap it at the comers. The tape must be applied before the art work is placed on the board, so that when it is positioned, a neat border of uniform width will show all the way around the outside edge of the art. Now shrink package as usual, holding the art in place with a spot of adhesive, if necessary.

Shrink Packaging Art

The visual effect of a neat, frame-like border around the art depends of course on the neat rectangular shape of the art. If the edges are not clean and straight, you could trim them, but only if the art is of no artistic or monetary value.

Framing

Shrink packaging leads easily into the world of framing, particularly for the do-it-yourself person. By avoiding the need for glass, almost anyone can frame art work by neatly shrink packaging it, then choosing a frame and having it supplied accurately mitered to the exact size required. The development of modern chop service for moulding, together with several recent innovations in joining, make it quick, easy and inexpensive to frame your art, if you can first shrink package it. We are talking about simple narrow mouldings in wood, plastic or aluminum, not elaborate period frames, which must be designed and constructed by picture framing craftsmen.

If you intend to frame your shrink packaged art, it may be matted or not. Either way, the corners must be accurately square, so that the frame will fit properly, and the backing board must be slightly larger than the mat or the art, to prevent buckling when the film shrinks.

For the most attractive final result, you want the film covering the art to present a smooth flat plane to the eye, so that reflections are unbroken, just as they are from a sheet of glass. If the shrink film only touches the art at the edges, and is hidden there by the lip of the frame, then it will remain perfectly smooth and flat over the whole area of the art image, and will not interfere with undisturbed viewing. A mat is one way to keep the film from touching the art. Of course, the frame will keep the art flat, even if a relatively thin backing board is used.

Very flat and smooth art will also help to keep the film smooth and flat. Dry mounting, or pressure sensitive adhesive mounting are

other aids to the desirable flat appearance, although they should not he used with valuable original art. All mounting, framing and presentation techniques involve a series of compromises with purely preservation and archival procedures, a complete discussion of which is beyond the scope of this booklet.

It helps to place the art on the concave side of the backing board if the board has even a slight bowing. This will lessen the contact of shrink film against art.

For the best possible appearance, carefully clean the dust from the surface of the art, use only the highest quality of shrink film, and use the heaviest guage available, between 100 and 150 guage. The heavier and stiffer the film, the less it will show the visual effects of contact with the art underneath, or even with tiny dust grains on the surface of the art. Finally, be extra careful when shrinking the film in the front, particularly around the edges, and do the edges first. This will lessen the effect of stretch marks in the corners and at the edges. If you burnish the sharp edges of the board before covering it, with a smooth, hard, rounded tool like a table knife handle, the film will slide more easily along the board edge as it shrinks, and will therefore minimize the stretch marks. A little extra heat from the gun will also diminish them, but be careful.

The moulding that you select can be much lighter, thinner and less expensive than what is required for glass framing, since the weight it will bear is much less. Measure the overall width and length of the shrink packaged piece, measuring along all four edges. If both length or both width measurements are not identical, or if both diagonals are not identical, the board is not a true rectangle, and will not frame well.

If you select an aluminum moulding, when you receive it from the supplier, you need only to assemble three sides with the hardware supplied, slide in the shrink packaged art, and then assemble the final

SHRINK PACKAGING ART

frame piece. A small screwdriver is required to tighten the screws in the comer fasteners.

Almost all wood frames are back loading. That is, you can assemble all four sides before putting the shrink packaged art in place. Wood frame lengths, supplied mitered to the exact size you require should be ordered with the comers routed to receive plastic joining plugs, known variously as dovetail fasteners, hugs, thumbnails, etc. The frame should be assembled with a touch of wood glue in each corner, followed by pressing the plug into its cavity. The procedure is quick and easy, and takes little skill. Retaining the shrink packaged art in the frame requires a few dabs of liquid adhesive , or some adhesive tape. Hanging your framed art requires nothing elaborate, since the entire assembly is quite light. You can use an adhesive hanger as described above to hang from a nail, or else simply hang the frame by the top moulding.

Another option for obtaining frames for your shrink pack-aged art is to buy standard inch lengths from an art supply store or from mail order suppliers. This method requires you to cut the backing board to an exact inch size before shrink packaging the art, which may result in poor visual design. That is almost always the result if you try to fit your art to pre-finished frames found in mass retail outlets.

The real key to simple, inexpensive framing at home is the use of shrink packaging to protect the art without glass, together with chop service, which gives you access to variety, with mailorder convenience and modest cost.

Shrink Packaging Art

List Of Suppliers

Here is a brief list of supliers of shrink packaging equipment, shrink film, foam board and other essentials. As of this writing(1993), few art supply stores carry shrink packagers. They alt do stock foam board and mat board. Framing supply wholesalers generally sell shrink packaging supplies.

Audio Visual Arts
817 Tatnall Street
Wimington, DE 19801
302-652-3361

Keith Coldsnow Ltd.
104 Westport Rd.
Kansas City, MO 64111
816-931-6682

Detroit Picture Frame
6365 Gratiot Ave.
Detroit, MI 48207
313-921-9332

Pictureframe Products, Inc.
34 Hamilton Rd.
Arlington, MA 02174
800-221-0530 (Mini-Wrap)

University Products Inc.
517 Main Street
Holyoke, MA 01040
413-532-3372

Valley Moulding & Frame
10407 Vanowen St.
No. Hollywood, CA 91605
800-932-7665

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Arlington, Massachusetts
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