

Instructions for Photopolymer Sheets



Photopolymer Sheets enable the designer to create very detailed, crisp, stamp-like impressions that can be used with Art Clay Silver, polymer clay, or other materials. The process is very simple and can be done at home or in a small studio. Although each sheet segment may only be used to form one design image, the designs are durable and may be used for multiple impressions.

The Photopolymer Sheets distributed by Art Clay World, USA are transparent amber with a matte surface, a thickness of .060" and a face relief of .045". The transparent quality of the sheet allows for easy see-through placement of the stamped image on a surface. Once an image has been transferred to the Photopolymer Sheet, the sheet will remain somewhat flexible which allows for easy removal from metal clay. It is recommended that the surface and detail of the Photopolymer Sheet be lightly brushed with olive oil to aid in release, as well as to keep the Sheet pliable.

Supplies needed:

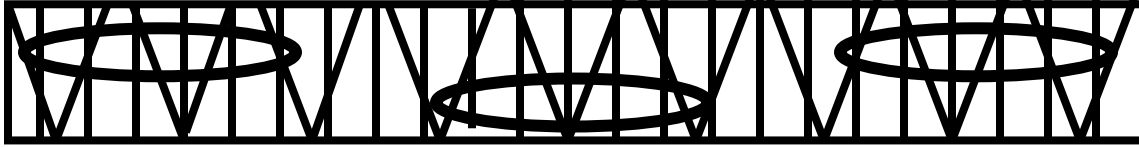
- Photopolymer Sheet.
- 4 strong "Bulldog" clips or quick release clamps that will allow positioning of the setup in close proximity to the light source used.
- Base piece of wood or tile thin enough to fit within the bulldog clips along with the piece of glass and Photopolymer Sheet to be included in the stack. A 6" x 6" piece of 1/4" graphite was used for example shown.
- Glass – approximately 2mm thick – avoid photo glass which is coated with a UV protectant, as it will not allow the UV light through to process the image. Glass should be about the same size as base, or sufficient size to be securely caught by the clips from the edge of the board. It is recommended that the edges of the glass be ground for users' safety.
- Overhead Transparencies ~ for the purpose of the instructions listed below, images will be on transparencies. Other items may also be used with satisfactory results, such as ferns, paper cutouts, etc. Remember that the image will be in the negative. The dark area will be the area of the stamp that is washed away, leaving the impression from the light area. The dark area should be solid so that no light is transmitted to the Photopolymer Sheet. Using an image with gray tones will muddy the image and is not recommended (unless that is the look desired!).
- UV Light Source ~ To include:
 - **NEW!** UV Cure Lamp (available from this Photopolymer Sheet Distributor or Art Clay World, USA) Very dependable, constant, controlled lighting. Exposure time tested at 30 seconds per image. One minute for post-exposure. Exposure area 5" long by 3" deep by 2 1/4" in height.
 - Sunlight – not very dependable for exposure times.
 - Halogen desk lamp – Inexpensive and readily available at most office supply or home stores. Constant, controlled lighting, which will enable fine-tuning of exposure times. Instructions contained herein were tested with a 50-watt bulb.
 - UV Sunlamp – not as readily available. Works faster than halogen, but may be more difficult to fine-tune exposures on items other than transparencies.
 - Professional exposure units. These may be available through printers and art departments. Exposure times will depend on the unit. See manufacturers' instructions.
- Drying source such as dehydrator or hair dryer.
- Small non-metal bristle brush and shallow pan or container for washout of residue.



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Process:

These instructions use a halogen lamp with a 50-watt bulb, and clear, sharp black images on overhead transparencies. It is highly recommended that you prepare a test strip to test your method of lighting. Prepare a test strip design on transparency film, approximately 1/2" wide and 3 - 4" in length. Use very crisp, strong black lines for your images, such as shown below:



Use a permanent marker to mark the **back** of the Photopolymer Sheet strip to show the 1" segments. Note the time of exposure in each segment as shown below. If using various types of light for exposure, also note which was used on each test strip made.

6	7	8	9	10
Halogen 50 watt				

Using the steps below to process the Photopolymer Sheet, expose one segment at a time, covering the remainder of the strip. Leave open only the segment currently being timed. When the end of the strip is reached, do the washout step, followed by drying and post-exposure of the strip. There will be slight differences in the results of each exposure. The 50-watt halogen lamp at Art Clay World headquarters requires an 8 minute exposure time for maximum depth of an image. Start the first segment of the test strip with 5 or 6 minutes and increase each segment's time by 1 minute.

- Select an image and print or photocopy onto a sheet of clear (not frosted type) transparency film. This is where the artists' personal designs come into play. Line drawings, personal logos, etc., can be drawn by hand or computer generated and transferred to transparency film. Prepare each drawing, deciding which area will remain raised (clear part of design) and which will be washed away). Sharp images work best ~ an image that is not crisp will leave uneven edges. This raised (clear) segment will be the impression pressed into the clay to create the stamped image, the washed out, unexposed area (black), will be the background of the stamped image. Prepare several images to be transferred to the transparency page at once and just cut them apart to use.



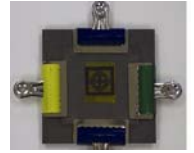
- Cut Photopolymer Sheet at least 1/8" larger than the desired finished stamp impression. Sheets cut easily with sharp scissors or a utility knife. Keep Photopolymer Sheets in the black plastic in which they arrive to avoid accidentally exposing them to light. Although fluorescent lighting will not expose the sheet, it is best to keep it covered until ready to use. Avoid working in an area with sunlight or any other UV light source.



- Remove plastic film from front of Photopolymer Sheet (discard film) and place transparency onto surface. Although having the rough side down is easiest to work with for positioning as it seats well, either side may be set down. (Try using one side then the other for a set of mirror images.) Set on center of base surface (wood, tile, etc.). Lightly smooth transparency down with fingertip to remove any bubbles in image.

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- Check glass piece and remove any smudges or dust that may show up in image. Place clean glass piece on top of stack. Remember to clean any Photopolymer residue from glass between each impression.
- Assemble the stack. The order should be from top to bottom 1= glass; 2=transparency film; 3=Photopolymer Sheet; 4=base (tile or wood). Clamping one at a time, across works best; sides 1-3, 2-4. Set on table.
- Place halogen light source approximately 2" from glass surface (or manufacturer's recommended distance if using professional light box). Center the light above image to be exposed.
- Set a timer and turn it and lamp on at the same time. Expose Sheet using time determined in test strip. The Art Clay World setup uses 8 minutes. Accurate timing is key to crisp images. After the timer goes off, shut the light off immediately.
- Unclamp setup and place exposed Photopolymer Sheet into shallow pan of tepid water.
- For deepest image, use a small, natural bristle brush and a circular motion. Wash until unexposed surface has receded and no longer has a sticky or slimy feel. Rinse under clear water and check image for any remaining residue. If residue remains, scrub a bit more in those areas. This step should take 4 - 5 minutes to reach the backing of the sheet. Wash out for a lesser time to achieve a shallow image for Keum-Boo.
- Dry with hot air dryer for 4 - 5 minutes. Piece should not be sticky after drying.
- Post-expose entire image for the same time as the initial exposure, keeping the same distance from the lamp. You do not need the base or glass for this.
- Image is now ready to use!
- Lightly apply olive oil to surface to act as a release for Art Clay use.
- Coat Photopolymer Sheet surface with olive oil to retain flexibility and avoid cracking and seal in a plastic bag to avoid dust.
- Store completed image sheets on edge to avoid warping.



Transparency and finished Photopolymer Sheet image.



Finished Art Clay Silver piece created with Photopolymer Sheet at left.