

HOW TO SILVER INSIDE A GLASS CONTAINER

You can use a Blown Glass Mirror Kit to silver inside any type of glass container – a freshly made one or an old found object. If you are silvering an old container, you could end up with a tarnished “antique” silver mirror. These results can be unexpected but very beautiful.

Once you know how to create a silver mirror, you can use the same process to create gold, copper and galena mirrors.

MIRRORING IS A CHEMICAL PROCESS. THESE PROCEDURES ARE *IMPORTANT*.

- **Cleanliness** - The glass must be absolutely clean, including the edges.
- **Gloves** - Wear gloves to keep your hands and the glass separate.
- **Careful measurements** - Be careful but not fanatical with measurements.
- **Distilled Water** - Always use steam distilled or de-ionized water. The minerals in tap water or any other type of bottled water will ruin the mirror.
- **Timing** - Use a clock or timer to time the tinning and silvering steps.
- **Concentration** - Arrange your time so you can work without interruption.

SAFETY

- **Storage** - Store the chemicals in a cool, dark place away from children and pets.
- **Staining** - The silver creates brown stains. Wear rubber gloves and cover your bench with several layers of newspaper. Silver Remover removes silver stains from skin and clothes.
- **Fumes** - Silver chemicals contain ammonia. We have respirators designed for ammonia and formaldehyde fumes.
- **Disposal** - These chemicals contain heavy metals. Follow the instructions in your Waste Treatment Kit to keep heavy metals out of the public sewer system.

YOU SUPPLY

- The glass to be mirrored
- A few gallons of steam distilled water
- A clock or timer with a second hand
- 2 plastic buckets for Waste Treatment

We include a sheet of stretchable, closed-cell Evalite foam so you can create a temporary closure for your container. It is re-usable – rinse with distilled water and dry.

STEP 1 - CLEAN THE GLASS



1. Add about ½ teaspoon (2 ml) of Liquid Glass Cleaner to about 8 fl oz of HOT tap water.
2. Pour it into the container and swirl and shake. Use Evalite foam to seal the opening.
3. The amount of cleaning needed will depend on the history of the container.

Glass for mirroring must be perfectly clean.

STEP 2 - RINSE OUT THE GLASS CLEANER



1. Rinse the glass a few times with tap water.
2. Rinse again with distilled water to remove the tap water.
3. Pour out all excess rinse water.

STEP 3 - MEASURE THE TIN FOR SILVER



1. Use the 10 ml cylinder to measure out 2 ml of concentrated Tin for Silver. Pour it into the measuring cup.
2. Add 2 fluid ounces (60 ml) of steam distilled water.
3. Use about 2 fl oz of diluted tin for each square foot of glass. Use more Tin for larger pieces.

Diluted Tin for Silver has a shelf life of 6 to 8 hours. *Mix fresh daily.*

STEP 4 - TIN THE GLASS



1. Pour in the diluted tin and seal the opening.
2. Swirl the tin over the glass for about 30 seconds. Watch the clock or use a timer.

Make sure the glass is completely covered for the full amount of time.

STEP 5 - RINSE THE TIN



1. Pour out the Tin into your Waste Treatment bucket.
2. Spray in steam distilled water to rinse the glass.
3. Shake and pour out the water.
4. Repeat the process to be sure all the Tin is rinsed out.

The Tin you need will stick to the glass. Any extra Tin that remains in the container will interfere with the silvering process.

STEP 6 - MEASURE THE SILVER



1. Pour the Silver chemicals into the appropriate Mck dispenser bottles.
2. Squeeze up 15 ml each Silver Solution, Silver Activator and Silver Reducer for each square foot of glass to be mirrored.

Use more of each chemical for larger objects. Always use equal amounts of the 3 silver chemicals.

STEP 7 - MIX THE SILVER



1. Take two new paper cups and pour the Silver Solution and Silver Activator into 1 cup.
2. Pour the Silver Reducer into the other cup.
3. Pour back and forth two times to mix them.

The chemicals should not change color in the cup (very pale yellow is ok).

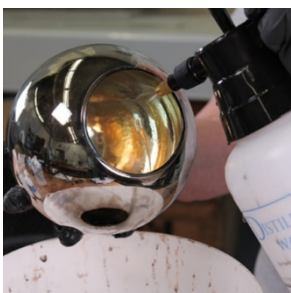
STEP 8 - SILVER THE GLASS



1. Pour the mixed silver into your container and seal the opening.
2. Swirl the silver over the glass for about 5 minutes. You will see the mirror develop from brown to bright silver.

If the silver coating is too light, you can add a second layer. Pour out the spent chemicals and pour in new silver. Do not re-tin the glass.

STEP 9 - RINSE THE MIRROR



1. Pour the used silver into your Waste Treatment bucket.
2. Spray or pour distilled water into the container and shake it thoroughly to rinse the silver.
3. Pour the rinse water into the waste bucket too.

Repeat to be sure the silver is well rinsed.

STEP 10 - DRAIN YOUR CONTAINER



Place your container over supports so that it can drain and dry completely. Water that dries in a puddle on the silver will leave a visible ring.

Any moisture trapped in the silver by the lacquer backing will eventually tarnish the mirror.

See our Tip for drying complex shapes below.

STEP 11 - PROTECT THE MIRROR



Protect the dry mirror with lacquer even if the piece has a small opening. Sulfur and other contaminants in the air will soften and tarnish unprotected metals over time.

Allow all of the excess lacquer to drain out of your piece as it dries.

STEP 12 - CLEANING THE EDGES



We find that some silver and lacquer always spills over to the outside.

1. Mix up a small quantity of equal amounts of Silver Remover Parts A and B.
2. Apply with a Q-tip or cotton ball to remove any silver that has deposited in the wrong place on your piece.

Clean off any residue from the Remover with a damp cloth.

STAND BACK AND ADMIRE YOUR HANDIWORK



Once you know how to make a silver mirror, you can use the same process to create Gold, Copper or Galena mirrors. We have separate instructions for these metals.

When you make a mirror, you have the power to explore and control the creative potential of reflected light.

HOW TO SPEED UP THE DRYING TIME FOR COMPLEX SHAPES

Blown glass sculptures with long thin areas, curved points and narrow openings can take a long time to dry. You will have better results if you do not hurry, but you can try this trick to speed up the process.

1. Rinse the newly mirrored surface with distilled water.
2. Drain out as much water as possible.
3. Pour in a moderate amount of acetone. The acetone will displace the water and tend to drive it out.
4. Rotate the piece to cover all the surfaces with acetone.
5. Allow the acetone/water mix to drain out completely.
6. Allow time for all the acetone and water to dry before lacquering the surface. Any moisture trapped under the lacquer can discolor the mirror overtime.

WARNING: Acetone is FLAMMABLE! Do not use near an open flame, spark, hot plate or any other source of ignition.

