

Accent Silver™ Application Instructions

Accent Silver™ by Jewelry Material Innovations is a silver-alloy slip that is used to apply silver embellishments to copper, bronze and brass metals. Its purpose is similar to Accent Gold for Silver™ which is used to apply gold accents to fired silver clay articles.

Accent Silver™ is mixed and applied in 2 coats, then fired in a jewelry kiln to permanently bond the silver to the surface of the metal. After firing, the silver-embellished surface can be polished and patinated like fine or sterling silver.

Tool List	
Flat paint brush with sturdy bristles	Scotchbrite
Palette knife	Steel hand brush
Beeswax	Steel pen-style scratch brush
Distilled water	Firing Tin with Activated Carbon
Small dish for distilled water	Firing Tongs
Small acrylic discs (2)	Polishing supplies

1 Stir the Accent Silver™ powder with a clean, dry palette knife. Break up any small lumps in the powder by mashing them against the container wall with the palette knife. Roughen and clean the surface of the metal using the Scotchbrite pad from your Starter Kit, or prepare the surface by one of the other options listed in our Metal Prep & Polishing Guide. Accent Silver™ can be applied to select areas using a mask. See the Metal Prep & Polishing Guide for instructions on creating masks.

2 **Mixing & Application - Base Coat**
Dip and hold the flat brush in a small dish of distilled water for several seconds to allow the natural bristles to take up the water. Then dip the wet (not dripping) brush into the container of Accent Silver™ to get a ball of the material on the end of the brush. Wipe the ball into a small pile on the mixing disc and pat it with the brush to encourage it to take up all the water, then sweep it back into a pile. Add a drop or two of water using the palette knife. Pat and sweep the material until it is very smooth and creamy, but not runny.

Brush a thin coat on the areas to be embellished. Any spots that are missed by the first coat will not be thick enough after firing. Do not allow the slip to puddle in the nooks and crannies. If there are areas that puddle, spread the material out to redistribute it. If the texture is deep, or if you want to apply to select areas, a round brush may be more helpful. Allow the base coat to dry at room temperature. Drying can be encouraged with a gentle airflow, but do not use heat at this point.

Use the palette knife to scrape clean the brush as best you can. Then wipe the palette knife off on the mixing disc to remove as much of the slip as possible. Wrap a little piece of cling wrap around the bristles to keep them moist.

3 **Mixing & Application - Cover Coat**
Dip and hold the application brush in the water container to re-hydrate the bristles. When the bristles soften up, re-hydrate the material on your mixing disc by dabbing it with the wet brush. Then add new material and mix as before, but this time add a drop less water than you did for the first coat. Use the palette knife to mash any lumps. The consistency of the slip should be smooth and creamy, but thicker than the first coat.

Brush Accent Silver™ over the dried first coat. Brush this coat on a little thicker than the first coat. There will be a lot of "tooth" from the dried first layer, which is what is needed here. The coverage should be even. Don't glob it on! While a single coat is not sufficient, applying it too thick is a waste of material. Don't worry that the details and fine texture are filled in. The surface will be smooth after firing.

Work quickly in applying the second coat because the moisture can re-hydrate the base coat and pull it back up, leaving bald spots. If you see areas that start to come up, work faster. Any bald spots can be repaired with a touch-up coat.

Allow the coated item to dry before firing. You may notice some white residue form on the surface as it dries. This is normal.

4 **Firing**
Your Firing Tin comes pre-filled with activated carbon. The firing tin has a laquer coating that will burn off with the first use. Be sure to vent the kiln for the first firing to avoid fumes. To fill the tin, remove the lid and bury the items and replace the lid. The box does not have to be filled to the top with carbon. If you lose some carbon here and there, it's okay. Refer to the Firing Guide for the time and temperature suggested for your kiln model.

FIRING WITH A TABLE TOP KILN: Arrange four ½" or taller kiln posts inside the kiln for the Firing Tin to sit on. If your kiln is a brick model, elevate the box so it is in line with a heating element.

The Firing Tin is inserted and removed from a pre-heated kiln with tongs, just as in enameling. Have a trivet ready to receive the hot Firing Tin. Space the kiln posts so there is clearance for the tongs. Practice moving the Firing Tin in and out of the kiln with the tongs a few times to be sure you have unobstructed access and a plan of action.

Set your kiln to the prescribed temperature (refer to the enclosed Firing Chart) and wait for it to pre-heat. When the kiln has reached the set temperature, open the door quickly, set the box on the kiln posts using the firing tongs, close the door, and set the timer.

If for some reason something goes wrong and you can't get the box in the kiln within 2 seconds, abort the mission. Temperature is critical to the successful bonding of Accent Silver™. If you fumble something and the door is open for more than 2 or 3 seconds, too much temperature has been lost. Just close the door, wait for it to return to target temperature and try again.

When the timer goes off, open the door immediately and remove the Firing Tin to a trivet to cool. The Firing Tin cools in less than 30 minutes, and can be opened carefully in about 10 minutes using leather gloves.

Top loading kilns need a sling for the Firing Tin to get it in and out of the kiln easily. (What is a sling? Visualize a helicopter airlifting a patient.) Get a package of steel wire from the hardware store and bend it up into some form of a sling with a loop on top for the tongs to grab. Most hardware stores offer packages of steel wire. The gauge doesn't matter, but you are most likely to encounter 16, 18, 22 or 24 gauge. Any of those is good. Put the Firing Tin in the sling and practice moving that in and out a few times.

FIRING WITH THE ULTRALITE KILN: Pack the coated articles in the Firing Tin. Place the flat cover on the kiln. Preheat the kiln for 15 minutes at full power. Place the Firing Tin on the brass cover and set the timer for 20 minutes. When the firing is complete, use the tongs to move the Firing Tin to a cooling trivet. The Firing Tin will cool in about 15 minutes. Use gloves when opening to be sure no heat remains.

When firing in the Ultralite Kiln, items should be placed coated-side down so it gets the most direct heat. All of the items to be fired must fit inside the flat Firing Tin. Do not use a taller container.

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Finishing

Use the steel hand brush to brush off the firing residue and reveal a dull silver color. Go gently! Do not scrub the metal. This step is meant only to remove the firing residue.

Next, use the steel scratch brush to burnish the silver. Set the bristles to about 1/8" in length. Using a circular motion, scour the silver surface lightly to bring up a clean, satin finish. Now the silver surface can be burnished or polished to your desired finish. See the enclosed Metal Prep and Polishing Guide for a variety of finishing options.

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Clean-up

Accent Silver™ left on your mixing disc between coats and between sessions can be left to dry. Store the disc in a plastic bag between sessions. The material should not be left in puddles, but should be spread out thinly on the disc for easier re-hydration. To re-hydrate, simply dab the dried material with a damp brush, then use the palette knife to scrape the material up in a pile, then add new material as needed.

To keep the brush from drying between coats, wrap a small piece of cling wrap around the bristles. After the palette knife dries, use your fingernail to scratch the dried material off onto the mixing disc to be reused.

Clean your brush between sessions. Use the palette knife to scrape as much Accent Silver™ from the bristles as best you can. Then wipe the palette knife off on the mixing disc to recover as much material as possible before washing the brush.

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Limitations

Accent Silver™ can be applied to an entire piece, both front and back, but it must be bonded in a single firing. Anything that can fit inside the Firing Tin can be fired. Using a larger firing container may be possible, however the firing schedules have all been tested in the flat tin provided in your Starter Kit. If you wish to fire a larger piece, I recommend using stainless steel foil (NOT aluminum) as the container, and test fire to be sure the time is correct. You may need to add or subtract a minute or two from the schedule. The idea is to get in and out as quickly as possible, so a higher temperature and shorter time is better than a lower temperature and longer time.

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Safety Precautions

Accent Silver™ contains fine silver powder and a chemical fluxing agent that can irritate the eyes. Take precautions to avoid getting it into the eyes. Wash your hands after use, and do not touch your eyes while handling Accent Silver™. If Accent Silver™ contacts the eyes, flush them immediately with water for at least fifteen minutes and see a physician. Although Accent Silver™ is not highly toxic, avoid ingesting it. If ingested, drink a glass of milk and contact a physician immediately. Work safely!

Metal Prep & Polishing Guide

Accent Silver™ is bonded to copper-bearing base metals through a process similar to soldering. The Accent Silver™-coated metal is heated to a specified temperature and held for a duration that allows the metallurgic process to occur. All of this is done in an oxygen-reduced atmosphere inside the Firing Tin to protect the base metal from oxidizing.

Successful bonding requires a clean, abraded surface, free from oxides, fingerprints and compounds. There are several options for cleaning and abrading the surface. BRONZclay and COPPRclay items can be tumbled prior to application if desired.

Metal Preparation Options

	By Hand	Flexible Shaft Machine
All metals	<p>Scotchbrite - Jewelers grade 400 grit wet/dry sandpaper Stainless steel scratch brush 3M Sponge Sanding Pad - Fine grit Sanding swabs - coarse grit</p>	<p>3M Bristle Discs: 36 grit for bronze, 80 for brass, 100 for copper use on slow speed Mini Fiber Wheel - coarse for bronze, medium for brass & copper 400 grit wet/dry sandpaper Miniature steel wheel Coarse polishing points</p>

Metal Finishing Options

	By Hand	Flexible Shaft Machine
Brushed Finish	Use a steel hand brush to brush the metal. The brush should have bristles that are about .02" in diameter. Brush the item, in one direction to achieve a uniform scratch finish	Use a miniature mounted steel brush on slow speed. Go in one direction only.
Satin Finish	Use a Scotchbrite pad to "scour" the metal surface. Go easy!	Use a mini fiber wheel. Fine for copper, medium for brass, and medium or coarse for bronze.
Matte Finish	Use a wet Scotchbrite pad sprinkled with baking soda to scour the surface.	Use a miniature mounted brass brush on slow speed.
High Polish	Burnish the surface with an agate or steel burnisher. Then, beginning with 1200 grit polishing papers, polish the surface up through 8000 grit and then buff with a polishing cloth.	Burnish the surface using a green Superflex polisher to accommodate the shape of the item. Then, use 3M Bristle Discs in grits starting at 6 micron, then 1 micron, then pumice. Buff with a polishing cloth.
Oxidized Satin Finish	Apply either a liver of sulfur patina or a heat patina, then use a Scotchbrite pad to "scour" the oxidation from the silver and leave a satin finish.	Apply either a liver of sulfur patina or a heat patina, then use a mini fiber wheel. Fine for copper, medium for brass, and medium or coarse for bronze.
Oxidized Matte Polish	Apply either a liver of sulfur patina or a heat patina, Use a wet Scotchbrite pad sprinkled with baking soda.	Apply either a liver of sulfur patina or a heat patina, then use a miniature mounted brass brush on slow speed.
Oxidized High Polish	Apply either a liver of sulfur patina or a heat patina, then use an Ultra Polish Pad to remove the oxidation from the silver. Next, burnish the surface with an agate or steel burnisher, and, beginning with 1200 grit polishing papers, polish the surface up through 8000 grit and then buff with a polishing cloth.	Apply either a liver of sulfur patina or a heat patina, then burnish the surface using a green Superflex polisher to accommodate the shape of the item. Then, use 3M Bristle Discs in grits starting at 1 micron, then 6 micron, then pumice. Buff with a polishing cloth.
Masks	<p>Since Accent Silver™ will only bond to clean metal, oxidation makes the perfect mask to selectively apply it. A mask can be a stencil, yellow ochre, china white, a correction pen (White-Out), or oxidation applied by a torch.</p> <p>To create a mask, first pre-polish and abrade the metal in the areas to receive Accent Silver™. Heat the entire piece with a torch until it turns dark gray. Cool or quench, then remove the oxidation from the areas to be embellished. Apply Accent Silver™ as directed and fire</p> <p>Stick-on stencils make wonderful masks for applying Accent Silver™ and come in many intricate designs. To use a stick-on stencil, first clean and abrade the selected area. Apply the stencil. Place a piece of paper or towel over the stencil and use the pressure of your finger to burnish the stencil down. (The paper protects the abraded area from picking up fingerprints and rolling the edges of the stencil). Then apply Accent Silver™ as directed. Gently peel off the stencil before firing. The dried material left on the stencil can be scratched off to your mixing disc with your fingernail.</p>	

Accent Silver™ Firing Guide

1. Find your Target Temperature

Find your kiln model from the chart below. Check the electrical data plate on your kiln and match it to your model. Circle your target temperature. This is the target temperature you will always use to fire Accent Silver in your kiln.

2. Select your Firing Time

The hold time for your firing depends on the thickness of the material you are firing. For brass stampings and pieces that are 3mm or less in thickness, use the 3mm hold time. Anything thicker than 3mm requires a little more time, so use the over 3mm hold time.

Accent Silver Firing Guide

Kiln Model	Kiln Wattage	Target Temperature	Firing Time	
			3mm or less	Over 3mm
E9AX	1100	1050F	10 min	12 min
Firefly	1680	1050F	10 min	12 min
Caldera	1680	1150F	10 min	12 min
SC2	1440	1250F	10 min	12 min
SC2	1680	1200F	10 min	12 min
E360	1500	1250F	10 min	12 min
E450	1800	1200F	10 min	12 min
SC3	1680	1200F	10 min	12 min
SC3	2000	1150F	10 min	12 min

3. Program your kiln

Program your kiln to heat at fast ramp to the target temperature found in the chart above for your kiln model. Set the hold time to 1 hour just so you have enough time for the procedure.

4. Load the Firing Tin

Bury your pieces in the activated carbon inside the Firing Tin, then replace the lid.

When the kiln reaches the proper temperature, insert it and set the timer.

After the timer goes off, immediately remove the Firing Tin from the kiln and place it on a trivet or heat-proof surface to cool. Then finish.



Accent Silver™ is a product of Jewelry Material Innovations, Inc.
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