GENERAL GUIDELINES



GLOSS ACRYLIC SEALER - Item #MCPR49 (QUART) Item #MCPR491G (GALLON)

Primary Use: Used as a clear, semi-gloss or matte top coat to seal finished parts from the effects of air and moisture, indoor or outdoor.

Application Method

Items may be dipped or brushed, but spraying is the recommended method of application. If thinning is required, thin with xylene, clean tools with xylene or acetone. Dried sealer may be removed with acetone. Will not withstand some solvents. **When applying, use adequate ventilation and do not breathe fumes for a prolonged period of time.** Be sure the surface of the part to be sealed is complete free from any moisture or humidity before applying. When using the Matte Sealer, make certain that you stir the sealer very good before using. Two or more thin coats are superior to one thick coat. Allow each coat to completely dry before applying the next coat.

Technical Data

Shelf life one year if properly sealed. Coverage is 300 to 600 square feet, depending upon surface and thickness of the coat. Contains UV protection. Caution-Flammable

COPPER PLATE - Item #MCPR40 (QUART) Item #MCPR401G (GALLON)

Primary use: Copper plate steel and non-stainless steel alloys **Secondary use:** Copper plate steel for further treatment with other metal finishes

Application Method

Prep steel by sandblasting, pickling, grinding, wire brushing or sanding. Wear latex gloves if handling part by hand as finger oils will effect the plate quality. **Copper Plate will work on un-prepped steel, but uneven plating will occur.**

Remove residual oils and dirt particles with mild detergent in solution. Rinse with water to remove soap residue. Copper Plate may be applied either by spray or immersion, but immersion is recommended for an even plating. Immersion time is normally 1-2 seconds resulting in a bright copper layer. After plating, immediately rinse in a water bath to remove excess plating solution. **If desired, apply Rust Arrest to neutralize chemical residue**. Allow Rust Arrest to remain for 20 seconds and rinse again.

Important: to retain the shiny plating, the finished part must be quick dried by blowing off the water with compressed air or another method of your choice. This will avoid a surface rust from forming, which would happen if allowed to air dry. Alternately, area can dry naturally, allowing a slight amount of rust to form, altering appearance and texture.

Item must be sealed with appropriate top coat such as an acrylic, enamel, lacquer, wax, clear powder coat etc., otherwise rust will eventually form. The Gloss Acrylic Sealer works very well.

Copper Plate may be used in conjunction with Rainbow Torch, Light Pewter and Dark Pewter to radically alter final appearance. If using one of these products along with Copper Plate, skip Rust Arrest step until finished applying the other solutions.

What If? Plating peels off? Plating is too thick, immersion or spray time is too long.

Plating is pink, not bright?

Plating is too thick, immersion or spray time is too long. Plating may peel.

Part will not plate?

Metal being used is not a compatible alloy, or is not steel.

White spots or lines appear?

Salt or chemical residue is still present. Rinse item better and use Rust Arrest.

Technical Data: Contains a mild acid. *Wear protective clothing, latex gloves, and eye protection and use adequate ventilation with a chemical respirator if spraying.* No known shelf life. VOC is under 250.

RAINBOW TORCH - Item #MCPR43 (QUART) Item #MCPR431G (GALLON)

Primary Use: Produce multi-colored torch-like effects on copper plate surfaces of steel treated with our Copper Plate or Auburn Insta-Rust.

Application Method

First clean steel and follow up by plating with the product Copper Plate and follow directions. *Do not dry the plated part before using Rainbow Torch; apply Rainbow Torch immediately after plating and rinsing.*

The Rainbow Torch solution can be applied many different ways, but the most popular method is to spray the areas you wish to color with a concentrated mist of Rainbow Torch until the colors begin to form. Some prefer to use a plastic airbrush with a controllable tip and others prefer a plastic bottle with a mist trigger sprayer. Drops of solution can be put on the plated surface and then blown in random directions to form sunbursts, lines or random patterns.

Once solution makes contact with plated surface, color changes will occur, including shades of gray, blue, green, red and more. When desired look is achieved, rinse the item with water to remove the excess solution. Apply Rust Arrest, allowing it to react for twenty seconds before rinsing again and then quick-dry to avoid rust forming. Next, the item or area should be coated with Acrylic Sealer or some type of top coat to avoid the formation of rust.

Rainbow Torch will also color parts plated with our Auburn Insta-Rust. See application instructions under Auburn Insta-Rust.

What If?

I only get shades of gray? You have over applied the Rainbow Torch.

Nothing seems to happen? You have not applied enough Rainbow Torch.

I'm using too much? Catch your overspray and any run off, filter and reuse.

I spray copper and nothing happens? It only works with Copper Plate and Auburn Insta-Rust, not on real copper.

Technical Data

As with all chemicals, *wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying.* No known shelf life. VOC is under 250.

RUST ARREST - Item #MCPR45 (8 OZ.) Item #MCPR44Q (QUART)

Primary Use: Is a neutralizing agent that helps neutralize oxidation on pieces treated with the metal finishes we stock. THIS PRODUCT IS ONLY TO BE USED WITH OUR LINE OF METAL FINISHES THAT HAVE BEEN APPLIED TO METAL. DO NOT USE ON METAL COATINGS.

Application Method: After desired effect is achieved, spray Rust Arrest on the finished area and rinse off any residue before beginning the drying process. Quick dry the piece and seal. **NOTE:** Some finishes are fragile and special care must be taken to not rinse off or damage the finish.

Technical Data

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250.

NOTE : Rust Arrest is highly recommended to stop the chemical process once your desired look is reached . The process can be stopped when your desired look is reached by rinsing the area well with water and spraying with Rust Arrest, rinse again, dry and seal.

GUN METAL BLUE - Item #MCPR51 (QUART) Item #MCPR511G (GALLON)

Primary Use: Ornamental bluing for steel. **Secondary Use:** Tarnish copper and copper alloys.

Application Method

Sand, sandblast, buff, polish or grind the metal to a bare surface before applying the Gun Metal Blue solution. Remove any dust, dirt and oils. *Wear latex gloves when handling the cleaned part as even finger oils will inhibit darkening*.

The most even results are achieved when the item being blued is immersed in the solution and agitated until an even degree of darkening is reached. After immersion, rinse the darkened part in water to remove the excess solution and dry. A layer of fine, dark rust will form. This rust should be removed and is easily done so with a burnishing wheel or soft cloth. The rubbing or burnishing will help to even out the finish. The item may be immersed again to further darken the metal, followed by rinsing, drying and burnished or rubbed. Repeat this process until satisfied - two or three applications is usually enough.

Spray item with Rust Arrest to neutralize any residual chemical, allow it to react for twenty seconds and rinse with water.

Dry the finished item. The end result will be a durable finish in shades ranging from a light copper/purple to a dark blue/ black. The Gun Metal Blue may also be applied by working the solution into the surface of the metal with a scratch brush, green scrubber or other abrasive pad. It will also work when used as a spray, although an even finish is difficult to achieve with this method.

Gun Metal Blue will darken some metals other than steel, and will tarnish copper and copper alloys. The final, burnished finish is a mild rust inhibitor, *but will not prevent rust. In order to prevent the part from rusting it must be oiled, waxed or coated with a clear top coat, such as acrylic, enamel etc.*

What If?

A green rust forms?

Remove with a soft cloth. May also be left undisturbed, then top coated for a color variation.

Technical Data

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250.

GOLD COATING - Item #MCPR42 (QUART) Item #MCPR421G (GALLON)

BRASS COATING - Item #MCPR47 (QUART) Item #MCPR471G (GALLON)

Primary Use: Able to turn porous surfaces into gold or brass finish. Works well with Patina Oxidizer to product depth and aged-look as well as varying shades of patina. Contains real copper flakes and can be intermixed with other products described in this document to create custom colors.

Surfaces: Can be applied to almost any porous surface for a golden effect (Gold Coating) or brass effect (Brass Coating). Contains real metals,

Application Method: Apply with brush. Gold or Brass Coating will work with Patina Oxidizer for an antiqued look.

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing vapors.

Auburn Insta-Rust - Item #MCPR46 (QUART) Item #MCPR461G (GALLON)

Primary Use: Used to quickly and attractively copper plate and simultaneously rust steel and ferrous metals. It will produce an ornamental rust finish on steel.

Secondary Use: Use as a copper plating solution, which can be further colored with Rainbow Torch, Dark or Light Pewter, Midnight Black and Gun Metal Blue and allowed to rust to various degrees of color change.

Note: In determining the end color of the rust, the most important factors are how much rust is allowed to form and the alloy content of the steel being rusted. Cleaning the steel to a bare, oil-free surface is essential for an even rust.

This product will work when applied over light mill plate, however it will not rust evenly. For an even, ornamentally-attractive rust finish, the area to be treated must be cleaned down to bare steel, removing all mill plate then wiped free of all dirt and oils.

Application: When the metal is clean, either spray it with the product or immerse it in the Insta-Rust solution until the desired color appears. Do not over apply. One light application is all that is required. Heavy or multiple applications may peel until a very deep rust is formed.

Do not rinse off the solution's residual because it contains rusting properties. Allow the treated area to air dry and begin to rust naturally. Once dry, the treated area should be placed in a high humidity environment and timed to allow promotion of the correct level of rust. An alternate method is to periodically mist the treated part with water until the desired level of rust is achieved. The time required varies according to the level of rust desired, ranging from minutes to one or two days.

Once the desired level of rust is reached, rinse the area well in water to remove the residual. Spray the area with Rust Arrest to neutralize and rinse again with water. Once dry, seal if needed.

To use with Rainbow Torch or finishes listed under Secondary use, first immerse cleaned steel into the Insta-Rust solution or spray the area. Shake off excess solution, but do not rinse. While the part is still wet, spray with Rainbow Torch according to directions. Allow the part to air dry and rust naturally. The treated part may be placed in a high humidity room or misted with water to accelerate the rusting process. As the part rusts, the colors present will gradually change and blend together until only subtle shades of lighter and darker browns and reds remain. The process can be stopped when your desired look is reached by rinsing the area well with water, spray with Rust Arrest, rinse again, dry and seal.

Unsealed areas will continue to rust, colors may change, rust may rub off on hands or stain concrete. Items designed for indoor can be sealed with Acrylic Sealer or a clear top coat paint, but for exterior items that are exposed to the element, the clear paint will not last very long, and peel in patches. For exterior items exposed to the elements, either leave the item unsealed or use Boiled Linseed Oil.

What If?

Nothing happens

The metal you are using is not steel or is covered with mil plate.

The finish peels off

You are using too much of the solution, causing the copper plate layer to be too thick and peel.

White areas appear

This is caused by residual salts if the area or item is not well rinsed and Rust Arrest is not used. I **don't want to seal it**----You don't have to, but finished parts will continue to rust.

Technical Data

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250

Light Pewter - Item #MCPR48 (QUART) Item #MCPR481G (GALLON) Dark Pewter - Item #MCPR50 (QUART) Item #MCPR501G (GALLON)

Primary Use:

Light: Reacts with steel, non-stainless steel alloys, "pot metal and some brass to create an authentic looking pewter finish in varying shades of gray.

Dark: Darkens steel, steel alloys, "pot" metal, brass and many other metals to various shades of pewter gray. Dark Pewter is primarily used to give metal parts an aged, antique appearance.

Secondary Use: Use under or over Copper Plate to produce differing antique copper finishes on steel.

Application (same for Light or Dark): Shake well before use. Clean the metal to be darkened down to bare metal. Important: Wear latex gloves as this solution will darken skin and finger nails.

Either spray onto cleaned metal or immerse in the solution until darkened. Dry darkened area. A fragile rust usually forms, and should be removed with a burnishing wheel or soft cloth. This process may be repeated until the area is desired shade. Area should be rinsed, dried and top coated. By lightly removing some of the finish from the high spots and leaving the recessed areas dark, a natural looking pewter finish can be produced on most steel alloys.

To achieve an antique copper look on steel, use one of two methods. Burnish most of the finish off of the higher areas. Next, either spray on Copper Plate or quickly immerse item in the Copper Plate solution. A dull copper plate will form on the burnished areas, with the recesses left darkened. **Rinse the item to remove excess solution, spray with Rust Arrest, rinse again, dry and seal.**

The second method is exactly the same procedure, except reverse the order of use of the solutions. First plate the area with Copper Plate, burnish off the highlights, then darken with Pewter. This will give you a dull copper back-ground with a darkened copper foreground.

Best results are achieved with immersion until the desired tone is reached. The metal will continue to darken while it is immersed. Once desired color is reached, rinse with water, **mist with Rust Arrest** and rinse again. Quick dry with compressed air before sealing with Acrylic Gloss sealer.

Note: The longer a area is left in the solution, the darker it will become. Most users opt to quick dry the darkened areas and then burnish them before sealing. This process will brighten the high spots and leave the recesses darkened. The result is a natural looking aged, pewter-like finish. If the darkened area is allowed to air dry and oxidize, differing shades of green rust will form. This can produce interesting and attractive finishes, so experimentation is worthwhile. Light Pewter will also darken areas plated with our Copper Plate solution. Different effects are produced on different types of metal as not all metals will react in the same fashion.

What If?
Plating peels off
Plating is too thick, immersion or spray time is too long.
Plating is pink, not bright
Plating is too thick, immersion or spray time is too long.
Plating is too thick
Immersion or spray time is too long.
Area will not plate
Metal being used is not a compatible alloy, or is not steel.
White spots or lines appear
Salt residue is present. Rinse area better or use Rust Arrest.

Technical Data

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250

Patina Oxidizer For Copper, Brass, Bronze - Item #MCPR41 (QUART) Item #MCPR411G (GALLON)

Primary Use: Used to speed up the patination process on brass, bronze, and copper without waiting for it to naturally occur over time. Will produce beautiful shades of patina. **Secondary Use:** Will also work to limited degrees on various other metals, producing rusts and colored patina effects.

Application: Apply Oxidizer by spraying, brushing, sponging or any other known patina method such as the sawdust method, vapor exposure or scratch brushing. Allow enough time for the reaction to occur. With direct application, the color changes will begin to appear after 20-minutes.

Reapplication will increase the color effects to a degree. Over application can cause the patina to peel or become spotty. Colors may be altered with water mists or by subjecting the areas to high humidity for various periods of time.

After the desired look is achieved, to retain the color seal while the final coat is still tacky.

Technical Data

As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250

Midnight Black - Item #MCPR52 (QUART) Item #MCPR521G (GALLON)

Primary Use: Reacts with steel, steel alloys and many other metals to produce a controlled, deep black rust. This solution can also be used on steel to produce a gray/green rust if area treated is left to oxidize.

Application: Clean the metal surface. Spray or immerse the surface in the Pewter solution. Allow several seconds for the reaction to occur. Rinse with water when desired finish is achieved. Quick dry with compressed air and seal dry and burnish.

Plating peels off

Plating is too thick, immersion or spray time is too long.

Area will not plate

Metal being used is not a compatible alloy, or is not steel.

White spots or lines appear

Salt residue is present. Rinse area better or use Rust Arrest.

Technical Data As with all chemicals, wear protective clothing, latex gloves, eye protection and avoid breathing mist. Use adequate ventilation with a chemical respirator when spraying. No known shelf life. VOC is under 250

