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BROWN C-1

Chocolate Brown for Copper, Brass & Bronze

DESCRIPTION:

Brown C-1 is a concentrated, rapid acting chemical patina solution to develop a deep brown antique finish on Copper, Brass & Bronze surfaces at **room temperature**. The developing brownish color resembles the natural oxidation of Copper, Brass & Bronze; very much like an aged penny. The product is a mildly acidic solution containing no Chromates, Sulfides, Cyanides, Caustics or Phenols. It is recommended for decorative & aesthetic purposes.

INSTRUCTIONS:

1. **Brown C-1** contains acids, PPE is required. Wear gloves, eye protection & a mask
2. Clean the part w/ Ajax, Comet or Triple-S' **Cleaner 104** along w/ a Scotch Brite pad & medium scrubbing.
3. Rinse thoroughly with water and dry.
4. Apply **Brown C-1(1:1)** solution with a brush, spray, rag or by dipping until the desired color develops. The color does take long to develop, it should begin to appear withing 30 seconds.

3a. Dilution rate: **Brown C-1** is concentrated & should be diluted w/1 part water. **(1 part water/1 part Brown C-1).**

5. Rinse thoroughly with over flowing water to stop chemical reaction & dry (pat drying is best).
6. Neutralize with **Triple-S' Neutralization Solution** or a baking soda & water mixture (½ cup of Baking Soda per 1 gallon of water).
7. Rinse thoroughly with water & dry (pat drying is best).
8. In order to ensure all moisture has been removed, heat drying with a heat source is recommended.
9. Once the piece is FULLY dry & cooled off, apply a sealer to protect the finish & provide maximum life. Triple-S offers several different options of sealers from which to choose, please inquire.

PREPARATION:

For effective results, parts **must be** as clean as possible. They must be free of oil, grease, rust/oxidation, alkalinity, acid, waxes or sealers before **Brown C-1** is applied. Parts **must be** thoroughly cleaned and de-oxidized prior to patina application. Ajax/Comet used in conjunction with a Scotch-Brite™ pad work well to clean new metal but older/more oxidized metal might require a stronger cleaning agent such as Triple-S' **Cleaner 104.** Make sure to rinse thoroughly with over flowing cold water to remove any residual cleaner. **Do not** use solvents like Acetone or Xylene, mineral spirits, thinners or petroleum degreasing solvents. It is important that alkaline cleaners are completely rinsed off prior to antiquing.

IMPORTANT: Triple- S does NOT recommend using any sort of alcohol, solvents like acetone, acids, mineral spirits or degreasers to clean parts prior to solution application. If the piece has heavy oxidation, **Cleaner 104** is a great cleaner to ready parts for **Brown C-1 (Cleaner 104** run off should be contained and disposed of as per hazmat disposal laws.) If the piece is fairly new & clean, powdered detergents like Ajax or Comet will suffice and are recommended. If further cleaning is required, **Cleaner 104** is recommended for removing heavy oils and/or heavy oxidation. Use your chosen cleaning agent with a Scotch-Brite™ pad or steel wool and medium scrubbing to prepare the part and then thoroughly rinse w/ fresh water.

APPLICATION:

Once the metal is properly clean and free of any foreign substances, apply properly diluted **Brown C-1** solution with a brush, dip or spray 10-60 seconds & let it react. A recommended and effective method of application is to rub the solution into in the surface of the metal with a Scotch-Brite™ pad (available at Triple-S). The desired finish will develop within seconds. Once the desired color has developed, rinse thoroughly with over flowing cold water to stop the chemical reaction & then neutralize. Dry the piece immediately, pat drying is recommended; leaving water on the piece can cause oxidation as well as water spots. It is recommended that a durable metal sealer be applied to the coating to provide maximum life. Triple-S offers several different options of sealers from which to choose.

Note: Diluting the solution further will yield the same end result, it will simply take longer. The immersion time can be shortened or lengthened depending on the dilution rate of the solution. A diluted solution will give you a little bit more working time and more control of the color intensity. The color will take longer to develop and therefore, the reaction can be stopped more precisely along a slower moving spectrum of color intensity.

The information stated herein is based on information and test we believe to be reliable. The accuracy or completeness thereof is not guaranteed. Since conditions of use are outside our control, user shall, before using, determine the suitability of the product for his intended use & user assumes all risk and liability whatsoever in connection therewith.

NEUTRALIZATION:
In order to ensure that the effects of **Brown C-1** have been fully halted prior to sealing, it is recommended to neutralize the surface. A lot of times, water alone can do the trick of halting the reactionary process but to fully neutralize, we recommend using **Triple-S' Neutralization Solution** or water mixed with a small amount of Sodium Bicarbonate (Baking Soda): ½ cup per 1 gallon of water, fully dissolved. This alkaline rinse solution helps to fully neutralize the acidity of the **Brown C-1** solution, which is essential to prevent future oxidation. Rinse this solution off thoroughly & dry before sealing.

SEALING:
In order to protect the thin layer of reactionary color that is deposited onto the metal when **Brown C-1** reacts, some type of coating/sealer is necessary. The project type will dictate which coating is recommended – mostly based on exposure to the elements or exposure to touch. If the resultant color is to be preserved, once the piece has been fully dried after neutralization, a protective coating should be applied. At the very least, a wax or oil can be applied to minimally protect the color. Triple- S carries several options of coatings varying from oils to water based clear coats to solvent based lacquers or urethanes. Important: most coatings do not react well with moisture therefore ensuring the piece is moisture free is critical; a heat source is recommended.

NOTE:
Metals absorb heat incredibly well and if left in direct sun, can hit temperatures in excess of 140° F. Do **NOT** apply **Brown C-1** to metal that has been sitting in direct sun. If the metal is too hot, the solution will evaporate before it has a chance to react and it can also create harmful fumes. If the metal is too cold, it will contract and close itself off to the outside world and the reaction will be minimal. Similarly, if the solution is too hot/cold, it will not yield the desired, uniform finish. For optimal results, both the solution and metal should be room temperature. If either the metal or solution are colder than 65 degrees or warmer than 85 degrees, the effectiveness of the solution will be lessened. Strive for mid 70s for both liquid temps and well as metal surface temps.

SOLUTION CONTROL:
The browning process with **Brown C-1** is a chemical reaction between the solution and metal surface. Chemical activity is gradually diminished as the solution is used but may be restored to the desired strength by adding fresh concentrate. Keep a record of additions to establish a bath history. Filtering the used solution will also help increase the longevity of the solution. Any immersion tank must be acid resistant. Plastic, plastic lined, glass, or rubber lined are all suitable. **Do not** use an unlined metal container. For effective results, parts must be free of oil grease, rust, alkalinity, acid, waxes or sealers.

CAUTION:
Avoid contact with skin or eyes. Contact with skin or eyes may cause irritation and/or burning sensation. Protective clothing, rubber gloves and a face shield should be worn when handling. In case of skin contact, wash skin with large amounts of fresh water. In cases of eye contact, flush immediately w\ large amount of fresh water for at least 15 minutes & ***call a Physician Immediately!*** In cases of ingestion: ***call a Physician Immediately!*** **Refer to SDS for more information.**

DISPOSAL:
Contaminated product, soil, water container residues and spill clean-up materials may be hazardous wastes. Avoid run off to sewers, drains, drinking water supply and/or natural water ways. Comply with local, state & federal regulations concerning solid or hazardous waste disposal and/or container disposal. Dispose of contents and/or container in accordance with local, regional, national, and/or int'l regulations.

BROWN C-1 IS HAZARDOUS -- DO NOT TAKE INTERNALLY!!

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