Triple-S Chemical Products, Inc.

3464 Union Pacific Avenue
Los Angeles, CA 90023
www.patinas.com

Toll Free: (888) 417-5214
Tel: (323) 261-7301
Fax: (323) 261-5567

BLUE-GREEN VERDE # 445 - NEW

TIFFANY GREEN ON COPPER, BRASS & BRONZE

DESCRIPTION:

Blue Green Verde # 445- New is a chemical solution that speeds up the natural aging process of Copper, Brass and Bronze and provides a beautiful Blue Green Verde Patina directly on the surface of the metal. **This process does not require previous treatment with antiquing solutions**. However, the metal needs to be cleaned and free of grease, oil, sealers, waxes and/or paint. Some specific applications include lighting fixtures, furniture, jewelry and other artistic creations and **this process is especially popular for *copper roofs and copper gutters.***

Coverage Area: Each gallon of **Blue Green Verde # 445** covers approximately 300 sq. ft.

PREPARATION:

Parts must be free of grease, alkalinity or acid when **Blue Green 445** is applied. Parts must be thoroughly cleaned and deoxidized prior to blackening. **Cleaner 104** is recommended for removing heavy oils and oxidation. Do not use petroleum-degreasing solvents that leave a residue on the surface. Rinse thoroughly with over flowing cold water to remove residual cleaners and dust. It is important that alkaline cleaners are completely rinsed off prior to blackening.

IMPORTANT: Triple- S does **NOT** recommend using any sort of alcohol, solvent, acid or degreaser to clean parts prior to solution application. **Cleaner 104** is a great cleaner to ready parts for **Blue Green 445** or even powdered cleaners such as **Ajax** or **Comet** can also be used. Use the cleaner in conjunction with a scotch brite pad and apply medium strength scrubbing to prepare the part then thoroughly rinse with fresh water. **Cleaner 104** run off should be contained and disposed of as per local hazmat disposal laws.

A- **TYPICAL CYCLE TO DEVELOP BLUE GREEN VERDE ON COPPER, BRASS OR BRONZE**

1. Parts must be free of oil, grease, wax, sealers and paint. Clean the part by lightly scrubbing with a Scotch-Brite pad and a mild cleaning detergent such as Ajax. For a more thorough cleaning, use Triple- S' **Cleaner # 104** which is a mildly corrosive cleaner that will properly ready the part for **Blue Green Verde # 445.** Make certain to thoroughly flush the part with water to remove any residue of the cleaning agent.

2. Spray ***just 1 coat*** of **Blue Green Verde # 445** patina with a plastic sprayer (garden pesticide sprayer) or any low-pressure sprayer and allow the piece to fully dry (at least 4-6 hours). A light mist of the **Blue Green Verde # 445** is enough to develop the patina. **Do not over spray!** If the piece is small, dip it in the solution for 5 seconds and let it react.

3. Whether to apply a sealer and/or wax depends on where the application piece is installed. If the piece is to be placed outdoors, it *should* be protected with a sealer. Not doing so will affect the adhesion and durability of the patina. However, if the patina is applied and allowed to rest on the piece for a minimum of 14 days, the better the adhesion and a sealer may not be necessary. Allowing the patina to sit on the metal for a few weeks time allows the patina to engrain and etch into the metal. **DO NOT** apply the patina and immediately place an unsealed part outdoors as fog, mist, or rain can affect the patina and perhaps wash it away entirely. Triple- S' **WSL-55 (flat or gloss)** is an excellent sealer for the **Blue Green Verde # 445**. Apply the sealer, **WSL-55,** once the patina is dry (4-6 hours) and allow it to air dry.

4. If the product is for indoor installation, it typically does not need to be sealed. However, if the **Blue Green Verde # 445** is on a piece (indoors **OR** outdoors) that will be exposed to constant human touch, such as a door knob, it should be sealed.

Before **After**



B- **TYPICAL CYCLE TO DEVELOP BLUE GREEN VERDE ON LIQUID COPPER.**

1. Apply a Primer as a sealer on cleaned Aluminum or Steel.
2. Air-dry the parts for 30 minutes.
3. Brush or spray the parts with **Metallic Copper Coating** in such a way as to cover the parts completely.
4. Let the part air-dry for 30 minutes.
5. Brush/spray the parts for a second time with **Metallic Copper Coating**.
6. Spray 1 coat of **Blue Green Verde # 445** on top of the parts while they are wet/tacky (do not allow the Metallic Coating to dry).
7. Allow the chemicals to react with Metallic Coating and a beautiful Blue Green color will result.
8. To protect this coat, apply or spray Water Base Lacquer, **WSL-55** on top of the Blue Green color.

IMPORTANT INFORMATION:

A patina is a slow chemical alteration of copper, which produces a basic carbonate and it can form on pure copper as well as alloys that contain copper, such as bronze and brass. As the surface of exposed copper reacts with chemicals to which it is exposed, patina/weathering will start to take effect. Initially the color will deepen to a brownish hue. By year five, the greenish color will start to take form. By year ten the green will further transform to a turquoisish tone and finally by years 25-30, it will start to form its' final light blueish color. In atmostpheres where the quality of air-born sulfur dioxide is relatively low, patina formulation may not fully occur for up to 14 years. In dry and arid regions, the same slow process can be true.

Triple- S' patina solutions simply speed up the natural aging process and put a piece somewhere along the timeline described above. Triple- S just helps you get there faster! Ultimately however, if the pieces are left to continue their natural aging process, they will all turn the same color.

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.
Do not take internally!

FIRST AID:

In case of skin contact, wash skin with large amounts of fresh water. In case of eye contact flush immediately with large amount of fresh water for at least 15 minutes and ***Call a Physician Immediately!***

DISPOSAL:

Contaminated product soil, water container residues and spill clean-up materials may be hazardous wastes. Avoid contact water. Comply with local, state and federal regulations concerning solid or hazardous waste disposal and or container disposal.

The information stated herein is based on information and tests 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 and user assumes all risk and liability in connection therewith.