



TECHNICAL DATA

B/OX™ 316 GEL

Room Temperature Oxidizing Solution Used to Produce Antique Verdi-Green and Blue Finishes on Copper, Brass and Bronze Surfaces via Swab on, Brush or Immersion

Solution Makeup

B/OX 316 GEL liquid concentrate is used full strength or diluted with water to produce a natural Verdi or patina green or bluish color on copper and copper alloys.

B/OX 316 GEL has the advantage that you do not need to apply a brown oxide to achieve the Verdi green/blue color, saving you money and time. The resulting **B/OX 316 GEL** film is thick enough to powder coat or lacquer over without losing the Verdi appearance.

Prior to charging a production tank, some experimentation should be done with properly prepared sample parts using various dilutions and immersion times to determine the conditions required to produce the desired color. Use the **B/OX 316 GEL** at 100 % by volume to 50% by volume diluted with water to try and achieve your color. The viscosity of **B/OX 316 GEL** produces a thicker patina coating than others. Immersion time is ½ minute to 3 minutes.

FINISHING PROCEDURE

1. Freshly grit blasted surfaces can have the **B/OX 316 GEL** applied immediately, no cleaning is necessary. Large architectural panels and objects should be cleaned by belt sanding, glass beads, sand blasting or other abrasive media.

EPI's **E-Kleen 163** spray neutral cleaner will remove finger prints and oily films on the brass or copper. Let the **E-Kleen 163** work on the soil for 1 to 5 minutes.

NOTE: Multiple cleaning applications may be necessary. Rinse with water to stop the cleaning action and dry the surface. Go to **B/OX 316 GEL** Step #4.

NOTE: If you have some oxidation on the metal substrate, **E-Kleen 154** is an acidic cleaner that will clean and deoxidize in one step. Use **E-Kleen 154** one part to nine parts water in a spray bottle, sponge or rag, wearing appropriate personal protective equipment. After cleaning and rinsing the substrate, remove excess water and dry the metal surface, then go to **B/OX 316 GEL** Step #4.

2. Rinse
3. Dry part

For best results and longer bath life, parts should be dry prior to immersing, brushing or swabbing on the B/OX 316 GEL.

4. Apply **B/OX 316 GEL** at the concentration of 50-100% by volume, 68-85°F (20-30°C), ½ to 3 minutes immersion. For swab on/brush, work the **B/OX 316 GEL** until you achieve the appearance you want. For some applications it might be best to use two applications of **B/OX 316 GEL** including drying the parts prior to the second application of **B/OX 316 GEL**.
5. **DO NOT RINSE! LET PARTS AIR DRY OR DRY THEM AT ELEVATED TEMPERATURES 250-350°F.** NOTE: Greener hue can be achieved sometimes by drying at higher temperatures.
6. For interior applications, seal with EPI's **E-Tec 520** acrylic lacquer or **E-Tec 521** wax. For outside applications you can apply an exterior durable lacquer or you also let it age without lacquer. Please note that the verdi green patina can scratch resulting in showing the substrate underneath the **B/OX 316 GEL**.

Equipment Requirements

The **B/OX** tank should be constructed of polypropylene. Racks, hooks, and baskets should be constructed of stainless steel or polypropylene. Non-ferrous metals such as galvanized iron, bronze, copper, tin or aluminum should not be used as the materials will contaminate or deplete the solution.

Hot alkaline cleaning and the **B/OX 316 GEL** solutions must be exhausted. The duct work may be of stainless steel, polypropylene or PVC. Galvanized steel should not be used. Your **EPI** representative is available to assist you in selecting and installing the complete tank system required for the process.

Caution

The **B/OX 316 GEL** solution contains Ammonium Hydroxide. It may cause severe burns. Do not get in eyes, on skin or on clothing. Do not take internally. Wear eye protection (glasses, goggles, or face shield), protective gloves and rubber apron when mixing solution and while working with the solution. Gas-proof goggles are the preferred eye protection. Work with the **B/OX 316 GEL** only in an area with good, forced ventilation to avoid breathing the ammonia vapors.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, call a physician.

When withdrawing **B/OX 316 GEL** concentrate from shipping container, be sure to be in an area with forced ventilation.

Avoid contact of **B/OX 316 GEL** concentrate and working solutions with acidic materials or other alkaline materials. Do not mix **B/OX 316 GEL** with any other chemicals or solutions.

Do not work with **B/OX 316 GEL** without first reading and understanding the **Safety Data Sheet** furnished by **EPI**.

Packaging

One (1), 5 and 55 gallon non-returnable containers.

IMPORTANT NOTICE! For Industrial Use Only

The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: sellers and manufacturers only obligation shall be to replace such quantity of the product as proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. **Neither seller nor manufacturer shall be liable either in tort or in contract for any loss or damage, direct, incidental or consequential, arising out of the use or the inability to use the product.**

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