

Insta-Blak® 333 GEL

Room Temperature Swab-On for Architectural Steels/ Touch-Up Black Finish for Iron and Steel

It is an instant-acting black chemical conversion finish for all ferrous metals except stainless steel. **Insta-Blak 333 GEL** is recommended for architectural steel surfaces (such as steel steps and steel framing), blackening re-machined black oxide surfaces, quick touch-up of scratched or damaged black oxide finishes. Products such as **Insta-Blak 333 GEL** can be used to meet **AMS 2484A**. However, **EPI** does not perform testing on these products to verify conformance to this specification.

It is also used for swab-on finishing of prototype parts.

It produces no dimensional or structural change in the metal.

The finish is resistant to solvents, oils, cutting fluids, etc.

For exterior architectural steel finishes, EPI recommends stainless steel and Insta-Blak SS-370 GEL because the steel might rust depending on the performance of the lacquer. Testing with Insta-Blak 333 GEL steel and exterior lacquer should be conducted prior to use. EPI recommends searching for high performance lacquers such as automotive or exterior powder coat clear.

Finishing Procedure

1. Degrease the area to be refinished with alcohol, chlorinated solvents, vapor degreasing, a liquid detergent or **EPI's E-Kleen 163**, a room temperature soak cleaner. Do not use petroleum solvents. Let the cleaner work 1-3 minutes. If the part(s) has been sand blasted or mechanically prepared the cleaning step can be skipped as long as the parts are free from any oils, lacquers, finger prints, or other soils. If this is the case skip ahead to step #4.

NOTE: Mill scale or heat treat scale must be removed prior to blackening in order to achieve the best and most uniform finishing results.

2. Rinse with running water, a damp sponge or damp cloth if a liquid detergent or **E-Kleen 163** was used. If water breaks occur during rinsing, try using **E-Kleen 163** again. Water breaks mean the substrate is not clean.
3. Remove any rust with steel wool or abrasive paper. A steel scribe works well for narrow scratches.
4. Apply full strength **Insta-Blak 333 Gel** generously with a cotton swab, sponge, brush or very fine to course Scotch Brite™ using a rubbing action. Use care to ensure a smooth and even coverage. Continue rubbing action for 1 to 3 minutes. It also helps to keep adding some fresh gel if the reaction has stopped. The depth of blackness is controlled by the length of time the solution is left in contact with the metal surface.
5. Rinse with running water, a damp cloth or damp sponge several times to remove residual blackening solution. Adding a small amount of baking soda to the rinse water will help insure the

complete removal and neutralization of the residual acidic **Insta-Blak 333 Gel** solution. If the residual solution is not completely removed, it may cause rusting of the surface as it dries.

6. Wipe dry or force dry with a heat gun. Do not use compressed air to dry.
7. Rub area with a soft cloth or brush to remove the non-adherent layer of spent chemicals from the surface.
8. Repeat steps 4, 5, and 6 if a darker finish is desired.
9. To enhance the depth of blackness and impart corrosion resistance the finish must be sealed with one of **EPI's E-Tec** brand of corrosion inhibitors. **E-Tec 502** will leave a slightly oily finish, **E-Tec 505** a soft, non-tacky dry finish, **E-Tec 520** a hard clear acrylic finish and **E-Tec 521** a clear wax finish. For architectural interior finishes use **E-Tec 520**, **E-Tec 521**, **RENWAX** or **E-LAQ 525**.

For architectural exterior finishes use high performance exterior automotive lacquer or exterior powder coat.

The **Insta-Blak** finish in itself imparts very little corrosion resistance. However, its porous structure will absorb the sealant, promoting long term corrosion resistance. The depth of blackness will be enhanced as the sealant is absorbed into the finish and may require 24 hour aging.

A non-adherent or spotty finish indicates improper degreasing, incomplete rust removal or other surface contamination.

Acid resistant plastic containers must be used to contain **Insta-Blak 333 GEL** solutions.

1 gallon of Insta-Blak 333 GEL will blacken approximately 100 square feet of steel.

Caution

The **Insta-Blak 333 GEL** solutions are mildly acidic. Avoid contact with eyes, skin and clothing. Wear eye shields, protective gloves and apron when preparing solutions and while working with the solutions. Do not mix the **Insta-Blak 333 GEL** solutions with alkaline materials, cyanide containing materials, or any other chemical substances. **The Insta-Blak 333 GEL solutions are toxic if taken internally.** Do not work with the **Insta-Blak 333 GEL** solutions without first reading and understanding the **MATERIAL SAFETY DATA SHEET** furnished by **EPI**.

Packaging:

One (1), five (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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