

BONDERITE M-CR 1132 AERO

Known as ALODINE 1132 TOUCH-N-PREP
January 2017

PRODUCT DESCRIPTION

BONDERITE M-CR 1132 AERO provides the following product characteristics:

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|---------------------|--------------------|
| Technology | Metal Pretreatment |
| Product Type | Conversion Coating |
| Application | Immersion process |

The Henkel BONDERITE M-CR 1132 AERO pen is designed to save labor, material, and time when applying a dry-in-place military specification approved chromate conversion coating for touch-up applications.

Its proper use also reduces worker contact to chromating solutions and waste, such as rinse water generated from a chromating process.

Before starting the application procedure it is necessary to become familiar with the mechanics of the pen itself.

1. The pen is designed with a protective cap. The cap is simply popped off. DO NOT TWIST or turn to remove this cap.
2. To activate the pen hold the pen tip down on the surface to be treated. Press the pen down onto the surface. This opens the internal spring valve allowing the BONDERITE M-CR 1132 AERO to wet the applicator tip. The liquid's yellow color will be visible. A new unit or new tip should charge in 15 to 30 seconds. When the BONDERITE M-CR 1132 AERO just wets the entire tip, release the downward pressure. The unit is ready to use.
3. Keep the pen's tip wet with BONDERITE M-CR 1132 AERO, but do not overly saturate with the treatment solution.
4. Immediately after use, gently press the cap back onto the pen to protect the applicator from dirt and damage. Do not use excessive force when replacing the protective cap.

DIRECTION OF USE

Preliminary Statement:

Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

General Information

Cleaning:

Begin the process with a clean, water break free, dry

surface. If the water rinse or treatment beads up on the surface, it has not been properly cleaned or it was re-contaminated. **Avoid finger marks!** Clean latex gloves are highly effective at preventing finger oil and lint contamination during cleaning.

A preferred method of surface cleaning is the use of a wet Bear-Tex or Scotch Brite® Pad to abrade the surface. Abrasion of the surface in two directions at 90 degrees is recommended. After cleaning, rinse with water if appropriate and dry the surface with a clean cloth. If cleaning with a dry abrasive pad is required, a wipe with a clean damp cloth is recommended to help remove residues. Wipe until no dark residue is picked up from the surface. A surface clean of residue (smut, abrasive fines etc.) will help keep the felt tip from becoming fouled.

Coating Weights and Coverage:

This product is approved for Class 1A coatings in a wide range of coating weights. **Heavy coating weights should be avoided for Class 3.**

MIL-DTL-81706A describes a strip-and-weigh coating weight determination method. The following table offers some guidance in obtaining the proper coating weight range and estimates expected coverage area per pen (with a second coat applied over the first dry coat).

Light Coating Weight:

Class 1A and 3. Felt tip damp. Wet film appearance similar to a common felt-tipped type marker. Expected coating weight range is 13 to 18 mg/ft². Dried appearance is nearly colorless. Expected coverage per pen is approximately 50 ft².

Moderate Coating Weight:

Class 1A and 3. Felt tip moderately wet. Wet film appearance is heavy, but would not sag if held at a 90 degree angle. Expected coating weight range is 18 to 22 mg/ft². Expected coverage per pen is approximately 35 ft².

Heavy Coating Weight:

Class 1A ONLY. Felt tip very wet. Wet film appearance is very heavy and would sag and possibly drip if held at a 90 degree angle. Expected coating weight range is 22 to 35 mg/ft². Expected coverage per pen is approximately 25 ft². If the coating puddles or tends to run, an excessive coating weight may be obtained. Be especially aware of depressions on the surface where excessive treatment solution could collect.

For economy and quality, the operator should be trained to keep the tip fairly moist- but not saturated with the treatment solution.

Proper Application and Use Procedure of BONDERITE M-CR 1132 AERO Pen per MIL-DTL-81706, Class 1A and

Class 3, Form VI, Method D for Aluminum and Aluminum Alloys Only.

Cleaning and Deoxidizing

Step 1:

Pre-clean the surface. If a solvent is used, do not allow the solvent to dry on the surface, but remove the solvent and dry the surface with a clean lint free cloth.

Step 2:

Wet a Bear-Text, 3M Scotch-Brite or other similar abrasive pad materials with water and scrub the metal surface to remove oxides and expose a fresh metal surface. Abrade the substrate in two directions. Rinse with water while cleaning (if possible) and then look for a water break free surface. If there is a water break, then continue scrubbing until a water break free surface is obtained and rinse again.

Step 3:

After rinsing, wipe the surface with a fresh, clean dry cloth. Insure the complete removal of all abrasive and loosened substrate residues. Allow the metal surface to dry before the coating application.

Note:

Wet cleaning is highly recommended. If water wet abrasive is not allowed due to sensitive components in the vicinity of the area to be treated, dry abrasive followed by a wipe with a clean water-damp wiper is recommended to remove cleaning residues. Wipe until no dark residue is picked up from the surface. A surface clean of residue (smut, etc.) will help keep the felt tip from becoming fouled.

Treating the Surface with BONDERITE M-CR 1132 AERO

Step 1:

Pop the cap. Do not twist or turn. Activate by holding the applicator tip down on the surface to be treated. Press the pen tip down for 15 to 30 seconds to open the spring valve allowing BONDERITE M-CR 1132 AERO to wet the applicator tip. When the BONDERITE M-CR 1132 AERO just wets the tip, release the downward pressure. The unit is ready to use.

Note:

The operator must insure the tip does not become overly saturated with the treatment solution, especially when creating a coating for Class 3 applications.

Step 2:

Apply BONDERITE M-CR 1132 AERO to the metal surface with firm, smooth, even strokes. Be sure to cover all edges. Overlap each stroke 50% to insure full coverage. **DO NOT PUDDLE! DO NOT RINSE! DO NOT WIPE!**

Note:

Solution breaks (de-wetting) must not be observed. A void in the wet film indicates inadequate cleaning. If needed, repeat the cleaning. Firm strokes during application helps avoid de-wetting.

Step 3:

A second coat is required at a 90-degree angle to the first coat for all MIL-DTL-81706A compliant applications (Class 1A and Class 3). Apply the second coat within 5 minutes after the first coat dries due to the fact that the treated surface becomes more hydrophobic as it ages. **DO NOT PUDDLE! DO NOT RINSE! DO NOT WIPE!**

Note:

As long as the Touch-N-Prep pen wets the surface, an adequate coating will form (at least 10 mg/ft² for a double coat). The dried coating deposited will range from nearly colorless to a moderately dark brown color.

Step 4:

BONDERITE M-CR 1132 AERO can be allowed to air dry. Using warm air or a radiant source such as a heat lamp is allowed (maximum recommended temperature is 140°F (60°C)).

A consumer hair dryer is ideal and will avoid overheating the surface.

Do not disturb the wet film during drying; such as by excessive airflow or contact with the treated surface.

Note:

An uneven appearance in the dry film is normal. Pre-warming the surface will give a significantly smoother appearance, and is recommended especially when the ambient temperature is less than 50°F (10°C).

Step 5:

To recharge applicator tip, repeat the activation process. Frequent short "jabs" during use are preferred to maintain constant coating weights and avoid over-wetting the felt tip.

Step 6:

Always replace the cap when not in use to avoid evaporation and contamination.

Step 7:

When BONDERITE M-CR 1132 AERO dries thoroughly, primers or other coatings may be applied. The painted BONDERITE M-CR 1132 AERO coating must be allowed to air dry for 14 days per MIL-DTL-81706A before being tested for wet paint adhesion (wet tape).

Note:

(1) For general purposes meaning non-military specification applications, BONDERITE M-CR 1132 AERO may be used on ferrous metals and galvanized surfaces. (2) A new applicator tip can be cut to conform to any shape with a single edge razor blade.

Storage:

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|---|---------|
| Temperature, °C | 0 to 40 |
| Shelf-life (in unopened original packaging), months | 24 |

Classification:

Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazards identification
Transport information
Regulatory information



ADDITIONAL INFORMATION**Disclaimer****Note:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.1