



Technical Process Bulletin

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TOUCH-N-PREP® COATINGS ALODINE® 871

1. General Discussion:

Alodine 871 is a non-hexavalent chromium dry-in-place conversion coating designed for use on aluminum and its alloys. The applicator used to deliver this product provides an easy and safe method of repairing bare areas of aluminum surfaces. Alodine 871 is formulated for both bare corrosion protection such as ASTM 921-02 and bonding applications when combined with organic coatings or structural adhesives.

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 the entire process.

A preferred method of surface cleaning is the use of a wet Bear-Text or Scotch Brite® Pad to abrade the surface. Abrading 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 to remove oxidation is required, a wipe with a clean damp cloth is recommended to help remove all residues. Wipe until no visual 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.

Alodine 871 Use and Coverage:

Light Coating Weight for Bonding:

Felt tip damp. Wet film appearance similar to a common felt-tipped type marker. Dried appearance nearly colorless.

Moderate Coating Weight for Painting:

Felt tip moderately wet. Wet film appearance is heavy, but would not sag if held at a 90 degree angle. Dried appearance is opaque.

Heavy Coating Weight for Bare Protection:

Felt tip wet. Wet film appearance is very heavy and would sag and possibly drip if held at a 90 degree angle. The dried appearance is an opaque blue iridescent. 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. If this occurs, blot off the excess solution before it dries.

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 ALODINE 871 Touch-N-Prep Pen.

2. 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 Scotch-Brite or other similar abrasive pad materials with water and scrub the metal surface to remove oxides and expose a fresh metal surface. Abrasion of the surface in two directions is recommended. 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. 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.

3. Treating the Surface with TOUCH-N-PREP® ALODINE® 871:

STEP 1:

Remove the cap. To activate, hold unit with applicator tip down on the cleaned active surface to be treated. Press and hold the pen tip down on the surface. This will open the spring valve allowing Alodine 871 to reach and wet the applicator tip. A new unit should charge in 15-30 seconds. When the Alodine just wets the tip, release the downward pressure. The unit is now ready to use.

Note:

The operator must insure the tip does not become overly saturated with treatment solution.

STEP 2:

Apply TOUCH-N-PREP ALODINE 871 to the aluminum 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. 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. The dried coating deposited will range from nearly colorless to a white opaque color.

STEP 4:

Alodine 871 can be allowed to air dry. Using warm air or a radiant heat source such as a heat lamp is allowed (maximum recommended temperature is 140F (60C). 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 of the dry film is normal. Pre-warming the surface will give a significantly smoother appearance, and is recommended especially when the metal or the ambient temperature is less than 50 F (10C).

STEP 5:

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

STEP 6:

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

STEP 7:

When Alodine 871 is thoroughly dry, primers or other coatings may be applied.

Note:

(1) Alodine 871 is for general purposes meaning non-military specification applications. (2) A new applicator tip can be cut to conform to any shape with a single edge razor blade.

Consult the appropriate Henkel Material Safety Data Sheets for safety and handling guidelines for this product.

Scotch Brite® of the 3M Company.