



Technical Process Bulletin

Technical Process Bulletin No. 234113

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BRUSH ALODINE® CHEMICAL KIT NO. 120

1. Introduction:

BRUSH ALODINE CHEMICAL KIT NO. 120 contains products formulated for treating aluminum to conform to MIL-C-5541C, Class 1A. This kit contains sufficient chemicals for cleaning and coating approximately 100 square feet of aluminum surface when used under normal conditions and in accordance with the following directions.

2. Operating Summary:

The products are used as received to produce the coating on aluminum.

3. The Process:

The complete process for treating aluminum with BRUSH ALODINE CHEMICAL KIT NO. 120 normally consists of the following steps.

- A. Cleaning with DEOXIDINE® 605
- B. Water rinsing
- C. Treating with ALODINE 1201
- D. Water Rinsing
- E. Drying

4. Materials:

The materials contained in BRUSH ALODINE CHEMICAL KIT NO. 120 are:

<u>Quantity</u>	<u>Description</u>
1 quart	DEOXIDINE 605
1 quart	ALODINE 1201
2	Beakers, polyethylene, 250-ml
1	Brush, nylon

ALODINE 1201 and DEOXIDINE 605 are available in bulk for industrial use in brush, dip or spray processes. Directions for such use will be sent on request.

5. Equipment:

A synthetic sponge, goggles, rubberized gauntlets, a respirator (if the solutions are sprayed) and clean wiping cloths.

NOTE: Beaker and brushes should be washed out with water after cleaning and after coating with ALODINE.

6. Surface Preparation:

Cleaning:

Surfaces previously anodized or coated with ALODINE should be cleaned with paint or lacquer thinner applied with a clean brush or rags prior to spot treatment with ALODINE. A steam jenny or gun with non-etching alkali may be used.

Surfaces not previously coated and/or corroded surfaces should be cleaned with DEOXIDINE 605. Brush the DEOXIDINE liberally on the surface, scrubbing oily areas thoroughly. Keep the surface wet with this solution for 1 to 3 minutes before rinsing.

Rinsing:

Before the DEOXIDINE dries, rinse the work thoroughly with clean water from a hose or by using clean water and applying with a brush, sponge or rag. After rinsing, the surface should be checked carefully to see that all surfaces are thoroughly wet. If there are "water break" areas, the surface is still dirty or oily and should be retreated with DEOXIDINE solution until water rinsing produces a "water break" free surface - or, in other words, a uniformly wetted surface.

It is not necessary to dry the rinsed surface prior to the application of ALODINE; keeping the rinsed surface wet with water prior to the application of ALODINE will assist in obtaining a more uniform ALODINE coating.

7. Treating with ALODINE 1201:

Buildup:

The ALODINE 1201 is used as received.

The coating produced with ALODINE 1201 in accordance with the above directions, meets the requirements of Military Specification MIL-C-5541B - for Class No. 1A, painted or unpainted. Other ALODINE chemicals are available to meet other application methods and Classes of this specification.

Aluminum properly treated with ALODINE 1201 usually has a thin, iridescent golden coating. The coating is hard and free from powder if the chemical has been properly applied.

When ALODINE is applied with a brush, the coating appears to be non-uniform. Streaks arising from brush marks and "rundown" of excess solution from the brush will be evident but these are not harmful. These conditions may be exaggerated if the metal has not been properly cleaned.

More surface uniformity will be obtained by applying the ALODINE to an aluminum surface which is wet with water from the cleaner rinse; or by applying it with a conventional paint spray gun.

Operation:

Apply the ALODINE 1201 with a brush, paint spray gun, cellulose sponge, etc., to the cleaned and rinsed aluminum surface, liberally, quickly and evenly; and allow it to act from 1 to 5 minutes before rinsing.

The solution should be applied to only as much surface as can be coated and rinsed before the ALODINE solution dries. Proceed with the coating and rinsing until the entire surface is coated with ALODINE.

8. After Treatment:Rinsing:

Before the ALODINE dries, wipe it from the surface with a clean cloth or sponge wet with clean water. The ALODINE may also be rinsed from the surface with clean water from a hose.

Drying:

After the rinsing, allow the work to air dry. Drying can be speeded by wiping with clean, dry rags. Clean, dry, compressed air should be used to blow moisture from joints, depressions, etc., and to speed the drying. When the surface is entirely dry, the part is ready for service without further treatment, or if desired, it may be painted in accordance with manufacturer's directions.

NOTE: If the work coated with ALODINE is to be painted, it should not be touched with bare hands. If painting is delayed, remove dust with clean, dry rags. If oil collects on the surface coated with ALODINE, remove it with paint thinner.

9. Storage Requirements:

Products should not be permitted to freeze or be exposed to temperature in excess of 100° Fahrenheit. Shelf life is one year.

10. Waste Disposal Information:

Applicable regulations covering disposal and discharge of chemicals should be consulted and followed.

Disposal information for the chemicals in the form as supplied is given on the Material Safety Data Sheet for each product.

The cleaning and processing baths are acidic. DEOXIDINE 605 contains phosphates and ALODINE 1201 contains hexavalent chromium and fluorides. Waste treatment and neutralization may be required prior to discharge to the sewer. (Refer to Waste Treatment Information Bulletin WT1004, available on request.)

The processing bath and sludge can contain ingredients other than those present in the chemical as supplied and analysis of the solution and/or sludge may be required prior to disposal.

Rags, sponges, swabs, etc., used for applying or removing the ALODINE solution should not be allowed to dry out. If allowed to dry, they may constitute a fire hazard. Immediately after use they should be thoroughly washed in water before discarding.

11. Precautionary Information:

When handling the chemical products used in this process, the first aid and handling recommendations on the Material Safety Data Sheet for each product should be read, understood and followed.

The products are acidic and may cause irritation of the skin and eyes. Do not get in eyes, on skin or on clothing. See Material Safety Data Sheet for appropriate protective clothing. In case of contact, follow the recommendations on the Material Safety Data Sheet for ALODINE 1201.

Handle the chemicals carefully, observing the usual precautions taken in the handling of acidic materials. Keep all unused chemicals tightly sealed when not in use. Goggles, rubberized gauntlets and protection for the clothing must be worn; if solutions are sprayed, a respirator must be worn.

Clothing contaminated with ALODINE 1201 can become dangerously flammable. Immediately remove contaminated clothing and rinse thoroughly with water.

Contact of combustible material with ALODINE 1201 may cause fire.

ALODINE 1201 contains chromic acid in excess of 0.1 percent. The following statement should be included as part of the label for containers in which it is stored.

"POSSIBLE CANCER HAZARD, CONTAINS CHROMIC ACID WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA. Risk of cancer depends on duration and level of exposure."

Refer to attached Material Safety Data Sheets for additional information.

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