Henkel
Adhesive Technologies

ALODINE 600 - BRUSH APPLICATION

1. INTRODUCTION

Alodine 600 is a powdered chemical used in an aqueous solution to produce on aluminium or aluminium alloys a protective coating which ranges in colour from light, iridescent golden to tan. The coating produced provides excellent protection for unpainted aluminium and bonds paint well.

It is particularly recommended where a low dielectric resistance coating is desired.

Alodine 600, being listed on the Qualified Product List QPL-81706, is an approved material to be used by Method B (brush processing) to produce Class 3 coatings, bare or painted, in accordance with Military Specification MIL-C-5541E.

It is applied using an acid-resistant brush, a swab, a synthetic sponge, or portable spray equipment, e.g., a paint spray gun or insect sprayer. The brush method of application is used when:

1. The number of pieces processed per day is not large, or

2. The parts to be treated are too large to be immersed conveniently in a tank, or

3. Touching up abraded or damaged areas on work which had been previously coated with **Alodine.**

2. PREPARATION OF ALODINE SOLUTIONS

Mix 22.5 grams of **Alodine 600** with each litre of water. Stir well until the powder is dissolved.

Note: A small amount of insoluble material may settle out of solution; this can be disregarded.

3. PROCESS SEQUENCE

Operation No. 1	Clean
Operation No. 2	Rinse
Operation No. 3	Coat with **Alodine 600**
Operation No. 4	Rinse
Operation No. 5	Dry

The work, after processing and drying, is ready for use either painted or unpainted.

Note: Operation No. 2 is necessary only with **Deoxidine, Metalprep or Alumiprep** precleaning. However, more uniform coatings can be obtained if the surface is wet with water prior to application of the **Alodine.**

4. PREPARATION OF THE WORK

Cleaning

The preferred method of cleaning is to remove grease, oil and corrosion with **Deoxidine 624** or **Special Deoxidine** MIL-M-10578. However, where no corrosion is present, thorough wiping with clean solvent is satisfactory.

Solvent wiping is preferred to touching-up reworked, abraded, or damaged areas of parts previously anodised or treated with **Alodine.**

Rinsing

When cleaning with **Deoxidine,** the excess solution and soil must be flushed from the surface with clean water or wiped-off with clean, water-damp cloths prior to the application of the **Alodine** solution.

5. APPLICATION OF ALODINE

Apply the diluted **Alodine** liberally to the aluminium surface. Treat only as large an area at one time as can be conveniently handled with the equipment being used (approximately 6-10 square feet of surface.)

Use as many applications as necessary to get the coating desired, allowing approximately one minute reaction time between applications and before final water rinsing. The colour of the coating will range from a light, iridescent golden to tan depending on the aluminium alloy, temperature and number of applications.

Coating is completed more rapidly when the work and the **Alodine** solution are at room temperature (approximately 18-25°C) or above. Normally, 1-5 minutes is required for coating formation.

6. RINSING AND DRYING

Excess **Alodine 600** solution should be removed by either of the following methods:

1. Flush the work thoroughly with clean water followed by:

    (a) Air drying
    (b) Blowing dry with compressed air
    (c) Warm or hot air drying
    (d) Wiping dry with clean cloths.

2. Wipe with water-damp cloths followed by wiping dry with clean cloths.

Any seams, joints and crevices should be blown dry with clean, dry, compressed air and the moisture splatters wiped dry with clean rags.

7. OPERATIONAL RECOMMENDATIONS

1. **Alodine**-saturated rags, sponges, swabs, etc., should be thoroughly washed with water before allowing to dry or discarding. Otherwise, they may constitute a fire hazard.

2. Operators should be equipped with rubber gloves, aprons and goggles to avoid contact with the solution. If spray applicators are used, operators should also be provided with respirators to prevent inhalation of the atomised solution.

8. EQUIPMENT NOTES

Acid-resisting (wood, rubber, stainless steel or plastic) buckets, troughs, or other suitable containers are used to hold the diluted **Alodine 600** solution. Lead, glass, tin, or galvanised iron should not be used. Storing the solution in mild steel containers will result in a slow decomposition of the solution.

Ordinary spray equipment (satisfactory for short or infrequent applications) will be slowly attacked by **Alodine 600.** This may be minimised by thoroughly flushing with water immediately after use. For continuous use, plastic or stainless steel cups and nozzles should be used in spray equipment.

9. PRECAUTIONARY INFORMATION

For specific information regarding safety and handling of the products used in this process please refer to the relevant Material Safety Data Sheet (MSDS).

DISCLAIMER