



BRITEGUARD™

ALDIP CF™

- *Maximum corrosion resistance.*
- *Cyanide free formulation.*
- *Immersion, spray or brush application.*
- *Excellent base for organic coatings.*
- *Clear to dark yellow coatings.*
- *Economical to use.*
- *Minimal effect on electrical characteristics.*
- *Meets MIL-C-5541 C.*

CYANATE-FREE CONVERSION COATING FOR ALUMINUM

ALDIP CF is a concentrated liquid chemical process that produces a highly corrosion resistant chromate conversion coating on aluminum and aluminum alloys. The process does not contain cyanide or cyanate, thus making waste treatment easier. The solution is easy to control and has excellent life.

ALDIP CF can be applied by swab, brush, spray or immersion. The color of the coating can be varied from clear to dark yellow. The darker coatings provide the greatest corrosion resistance. This coating may be color dyed or used as a final finish. It also makes an excellent base for organic coatings.

ALDIP CF is a self-regulating formula, easy to use and control and is completely uniform throughout the part. When used at lower concentrations, it has minimum effect on electrical characteristics of aluminum for either high or low frequency work.

ALDIP CF meets performance requirements of Military Specification MIL-C-5541C; MIL-C-81706 Class 1A, Form II, Method A, B, C.

OPERATING DATA

ALDIP CF	1 %/volume.
Temperature	60 - 115 ° F. (15.6-37.8° C)
Time	1-3 min.
pH	1.5 - 3.5
Agitation	Mild Air

pH RECOMMENDATIONS

It is recommended that lower concentrations of **ALDIP CF CF** use higher pH values, while higher concentrations use lower pH values. Maintain bath pH at 1.5 to 3.2 with nitric acid. When color of work becomes light, an addition of 0.5% of **ALDIP CF** and nitric acid to maintain pH.

An increase in pH will cause a lighter color film. Conversely, a decrease in pH will cause a darker color. Too high a pH will produce no coating, too low a pH will produce a powdered coating. Low pH may be raised by additions of dilute caustic soda.

SPRAY/BRUSH APPLICATION

ALDIP CF can also be applied by spray application. Concentration and spray times vary depending on the alloy processed. Cleaning and pickling of parts is critical prior to spray application, to insure a surface that is ready for the chromate treatment.

	<u>RANGE</u>	<u>TYPICAL</u>
ALDIP CF	1-4%/vol. (7.5-30 g/l)	2%/vol. (15 g/l)
Temperature	60 -115° F (15-49°)	75 ° F. (24°)
Time	10 sec-60 sec.	
pH	1.5 - 3.5	1.8

SOLUTION CONTROL

Analytical Control:

- 1) Pipette 10 ml sample into 500 ml flask and add 200 ml of distilled water.
- 2) Add 10 ml 10% Potassium Iodide Solution.
- 3) Add 5 ml of concentrated Sulfuric Acid.
- 4) Titrate with 0.1N Sodium Thiosulfate until the solution turns a light yellow. Immediately add 1 ml 1% starch indicator and continue to titrate the blue solution to a greenish clear endpoint.

Calculation: Mls of 0.1N Sodium Thiosulfate x 0.190 = % by volume of **ALDIP CF**.

VARIABLES

Several factors influence the final appearance and protection of the chromated parts, among those are: bath concentration, bath acidity, bath temperature, time, drying temperature, load size, cleaning, agitation, age of solution, transfer times, base metal and rinsing. These variables should be kept in mind when fine-tuning the chromate to meet specific performance requirements.

NOTES

- All chromate coatings are soft when wet. Coatings will completely dehydrate and harden in 48 hours. Any corrosion or adhesion testing should be done *after* proper curing for the tests to have meaningful results.
- High temperatures accelerate the chromate formation, while low temperatures retard chromate formation.
- Good flowing rinses are necessary for optimum results. Color and corrosion results are affected by poor rinsing.
- Final hot rinse should not exceed 140°F (60° C) and immersion time kept to a minimum.
- The appearance of the finished product is directly related to the appearance of the base metal. Coatings on 6061, 7075 and diecast will tend to be light in color while 3003 and 5052 will be dark in color.
- Coatings are capable of being dyed various colors for identification purposes. It is recommended that good rinsing is employed since dye solutions are sensitive to drag-in.
- The life of a solution depends on many factors. However, it is recommended that when maintenance additions equal to 150% of the initial make up have been made the bath should be dumped.

STORAGE/HANDLING

ALDIP CF is a strong oxidizing material. Do not store near combustible materials. Keep containers closed when not in use.

The use of **ALDIP CF** solutions require the handling of concentrated chrome-bearing materials. Avoid contact with skin and eyes. Wear proper protective clothing and face shield. In the event of contact, flush affected area with plenty of fresh water and contact a physician. **REFER TO THE MATERIAL SAFETY DATA SHEET FOR MORE SPECIFIC INFORMATION BEFORE USING THIS PRODUCT.**

MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheets (M.S.D.S.) are readily available on this product. It is strongly recommended that all personnel thoroughly read and understand the information contained in both the Technical Data Sheet and the Material Safety Data Sheet before using this product.

WARRANTY

The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate. No warranty or guarantee expressed or implied is made regarding the performance of any products, since the manner of use is beyond our control. No suggestion for product use nor anything contained herein, shall be construed as a recommendation for its use in infringement of any existing patent, and we assume no responsibility or liability for operations which do infringe any such patents. The above includes confidential and proprietary information of **A BRITE** and is furnished to you for your use solely on products or processes supplied to you by us.