

BONDERITE® M-CR ALCRM1200 AERO

Known as ALOCROM 1200
April 2025

PRODUCT DESCRIPTION

BONDERITE® M-CR ALCRM1200 AERO provides the following product characteristics:

Technology	Metal pretreatment
Product Type	Conversion coating
Application	Immersion, spray, brush

A rapid process which forms a protective golden coloured conversion coating on aluminium and its alloys.

Application areas

BONDERITE® M-CR ALCRM1200 AERO is a powdered chemical used to produce a protective coating on aluminum which ranges in colour from light iridescent golden to tan. The process is operated at room temperature. The coating produced minimizes corrosion and provides an improved bond for paint.

Technical data

(as supplied):

Appearance brown powder

GENERAL INFORMATION

Prior to application it is necessary to read the **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.

Direction of use

Bath make-up:

For each 1,000 L of bath, add to the water with stirring or circulating by the pump add 7.5 to 15 kg BONDERITE® M-CR ALCRM1200 AERO .

Operating data

Points Cr (VI)	6.7 to 13.5
pH value	1.6 to 2.1
Temperature, °C	20 to 40
Time, min	1 to 5
Class 3 - time, min	0.25 to 3.0

Brush application

Acid-resistant (wood, rubber, stainless steel, or plastic) buckets, troughs, or other suitable containers are used to hold the diluted BONDERITE® M-CR ALCRM1200 AERO coating chemical solution. Lead, glass, tin or galvanized iron should not be used. Storing the solution in mild steel containers will result in a slow decomposition of the solution.

Spray and immersion application

Process piping and pumps should be constructed of 316 or 304 stainless steel alloys. Various formulations of plastic pipe may be used with recommended support spacing, Schedule-80 being generally recommended. PVC Type I is limited to maximum process temperatures of 140°F. (60°C). CPVC and PP may be used up to a maximum process temperature of 190°F (88°C). PVDF may be used for all expected operating temperatures and may reduce the rate of scale build up in process piping. The nozzles should be fabricated from 316 stainless steel..

Heat exchanger plates should be polished 316 stainless steel. If gas fired burner tubes are used, they should be made of schedule - 80 mild steel pipe or equivalent. All process circulation pump seals, valve seats, door seals, etc., which come into contact with the process solution and occasional acid equipment cleaners, should be FKM or PTFE may be used, but its life will be shorter. Chemical feed pump parts and other elastomers which may come into contact with the concentrated replenishing chemical should be FKM or PTFE. Again, EPDM may be used, but its life will be shorter.

Process description

1. Clean
2. Rinse
3. Deoxidize
4. Rinse
5. Coat with BONDERITE® M-CR ALCRM1200 AERO
6. Rinse
7. Rinse with deionized water
8. Dry

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

Bath control**BONDERITE® M-CR ALCRM1200 AERO titration:**

1. Pipette 10 mL sample of the BONDERITE® M-CR ALCRM1200 AERO coating chemical bath into a flask and dilute with 50 mL distilled water.
2. Add 20 mL of 25 % H₂SO₄ and 2-3 g potassium iodide.
3. Titrate against 0.1 N sodium thiosulphate solution until the colour changes from brown to yellow.
4. Add several mL of soluble starch solution to the sample and continue the titration until the blue-black colour disappears.
5. Record the number of mL of 0.1 N sodium thiosulphate solution used as Cr(VI)-points.

Replenishment

Add 1.1 kg of BONDERITE® M-CR ALCRM1200 AERO per 1000 L of bath for each Cr(VI)-point lacking.

pH control

A pH determination should be made each time the BONDERITE® M-CR ALCRM1200 AERO coating chemical bath has been replenished.

The optimum pH lies between 1.6 and 2.1.

Note

The pH of the BONDERITE® M-CR ALCRM1200 AERO is adjusted with diluted caustic solution and nitric acid, respectively.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal storage: -10 to 40°C

Product may show slight caking in time, this can easily be reverted and does not impact material performance.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel representative.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on the specifications of this product.

Data ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

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