Technical Data Sheet

BONDERITE® M-CR 1200 AERO

Known as Alodine 1200
September 2023

Product description

BONDERITE® M-CR 1200 AERO provides the following product characteristics:

Technology	Metal pretreatment
Product Type	Conversion coating
Application	Immersion process

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

Application areas:
BONDERITE® M-CR 1200 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.

BONDERITE® M-CR 1200 AERO coating chemical, being listed on the Qualified Product List QPL for MIL-DTL-81706, is an approved material to be used by Method C (immersion processing) to produce Class 1A and 3 coatings, bare or unpainted, in accordance with Military Specification MIL-C-5541 B.

Technical data

(as supplied):

Appearance	brown powder
pH-value (of a solution at g/l)	1.2 to 1.8

Direction of use

Preliminary statement:
Prior to use it is necessary to read the **Material 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. Please also refer to the local safety instructions and contact Henkel for analytical support.

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 1200 AERO .

Operating data:

Points Cr (VI)	6.7 to 13.5
pH value	1.8 to 2.1
Temperature, °C	21 to 38
Time, min	1 to 5
Class 3 - time, min	0.25 to 3.0

Process description:

1. Clean
2. Rinse
3. Deoxidize
4. Rinse
5. Coat with BONDERITE® M-CR 1200 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 1200 AERO titration:

1. Pipette 10 mL sample of the BONDERITE® M-CR 1200 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 KJ.
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 1200 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 1200 AERO coating chemical bath has been replenished.

The optimum pH lies between 1.8 and 2.1.

Note:
The pH of the BONDERITE M-CR 1200 AERO is adjusted with diluted caustic solution and nitric acid, respectively.

Classification:
Please refer to the corresponding **Material Safety Data Sheets** for details on:
Hazardous Information
Transport Regulations
Safety Regulations

Storage:

Recommended storage temperature, °C	-10 to 40
Shelf-life (in unopened original packaging), months	24

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

Additional information

Disclaimer

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Reference 2

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