Henkel

Surface Technologies

Translation of the German Technical Process Bulletin

Alodine® 1200 two component brush-on process

Yellow chromating of aluminium

Fields of application:

Alodine® 1200 is a two package chemical used to produce a protective coating on aluminum which ranges in color 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.

Alodine® 1200 is used in an immersion, spray and brush-on application. This Technical Product Bulletin is valid for a brush-on process.

Process components:

Alodine® 1200 is divided in two components:

Alodine® 1200 A - liquid, chromic acid containing component
Alodine® 1200 B - powder, fluoride containing accelerator

Nitric acid (62 %)

Coating bath make-up:

For the preparation of 10 l of the Alodine® 1200 coating solution add to 7 l water under stirring:

Alodine® 1200 A	0,27 kg
Alodine® 1200 B	0,17 kg

	Nitric acid (62 %)	0.04 - 0.07 kg or 30 - 50 ml

After complete dissolution fill up with water to 10 l.

Do not premix the two components before adding to the bath. Add each component seperately to the bath solution!

Operating conditions:	pH	1.3 - 1.7
	Temperature	20 - 40 °C
	Time	20 - 180 sec.

Process sequence:	Operation No. 1	Clean/Pickle
	Operation No. 2	Rinse
	Operation No. 3	Chromate with Alodine® 1200
	Operation No. 4	Rinse
	Operation No. 5	Dry

Clean/Pickle: Products of the Primalu® typ are used for cleaning/pickling. Check back with their data sheets.

Rinse: The clean surfaces are thoroughly rinsed with cold tap water.

Chromating: The wet surfaces are treated for 15 sec. to 3 min by brushing on the Alodine® 1200 solution with a acid proofed sponge or a soft brush. The surface must stay wet all the time. Too long treating time or a too high concentrated Alodine® 1200 solution will result in layers which are powdereous and can be wiped off. Too low temperatures of the solution and/or substrate inhibit the coat formation.

In case of having achieved powdereous coats these layers should be washed off with a soft sponge and much water. The remaining firmly sticking layer is suitable as a coat for subsequent painting.

Rinse: The chromated surface is thoroughly rinsed with cold tap water.

Drying: The PMT during the drying should be kept below 100 °C.

pH-Adjustment: A high pH can be readjusted by adding nitric acid and a low pH by adding caustic solution (5 %).

Required pH:	1.3 - 1.7

Remarks:

The tank material containing Alodine® 1200 should be made out of rigid PVC (free of plasticisers) or austenic steel (type 1.4571).

Hooks and basket will have to be made out aluminum, rigid PVC (free of plasticisers) or austenic steel.

Spraying systems, pumps and heat exchangers have to be made out of stainless steel (type 1.4571).

Bathes of Alodine® 1200 as well as its rinsing bathes are not to be discharged into the public sewage system without prior detoxification and neutralization.

Caution:

Alodine® 1200 A contains chromium trioxide!
Alodine® 1200 B contains fluorides.

Wear
- Eye goggles
- Rubber gloves
- Acid resistant wear
- Avoid contact with skin
- Provide air circulation

Equipment and chemicals for the analysis:

pH-meter

The expiry date of the product is given on the packaging labels.

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Henkel Oberflächentechnik GmbH
40191 Düsseldorf
Telefon +49 211 797 3000
Telefax +49 211 798 3636

Henkel Teroson GmbH
Postfach 10 56 20
69046 Heidelberg
Telefon +49 6221 704 0
Telefax +49 6221 704 698

Henkel Oberflächentechnik GmbH
Geschäftseinheit Wasserbehandlung
D-40191 Düsseldorf
Telefon +49 211 797 9190
Telefax +49 211 798 2262

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