

SurTec® 482

Etching Degreaser for Aluminium

Properties

- powder
- highly alkaline
- free of silicate and surfactants
- contains no nitrite or nitride
- especially suitable for tarnishing of thin walled pressings (e.g. boxes, tubes)

Application

make-up value: 2-10 %

temperature: 50-70 °C

application time: 1-15 min

further treatment: Components of the alloy, which are building a mud on the surface while etching, can be removed in SurTec 495.

Maintenance and Analysis

Analyse and adjust the concentration of SurTec 482 regularly.

Sample Preparation

Take a sample at a homogeneously mixed position. Let it cool down to room temperature. If the sample is turbid, let the turbidity settle down and decant or filter the solution.

SurTec 482 and Aluminium – Analysis by Titration

reagents: 1 N hydrochloric acid
potassium fluoride powder
indicator: phenolphthalein (1% solution in alcohol)

procedure: 1. Pipette 10 ml bath sample into a 250 ml Erlenmeyer flask.
2. Dilute with approx. 100 ml deionised water.
3. Add 3 drops of indicator.
4. Titrate with 1 N hydrochloric acid from red to colourless.
consumption of hydrochloric acid in ml = **A**
5. Add approx. 2.5 g potassium fluoride to the solution.
6. Titrate the new appeared red colour once again to colourless.
consumption of hydrochloric acid in ml = **B**

calculation: $B \cdot 1.8 = \text{g/l Aluminium}$
 $(A - B/3) \cdot 0.463 = \% \text{ SurTec 482}$

For new made-up baths, only the titration A is necessary. The calculation therefore is:

$\text{consumption in ml} \cdot 0.463 = \% \text{ SurTec 482}$

Technical Specification

(at 20 °C)	Appearance	Bulk Density (kg/l)	pH-value (at 10 g/l)
SurTec 482	powder, white	approx. 1.100	approx. 13

Ingredients

- phosphates
- chlorides
- caustic alkali
- salts of organic acids

Stock Keeping

In order to prevent delays in the production process, per 1,000 l bath, the following amounts should be kept in stock:

SurTec 482 100 kg

Product Safety and Ecology

The safety instructions and the instructions for environmental protection have to be followed in order to avoid hazards for people and environment. The Material Safety Data Sheets (according to European legislation) contain explicit details for this.

The following hazard designations and classifications into water hazard classes (WHC) have to be taken into account:

<u>product</u>	<u>hazard designation</u>	<u>water hazard class</u>
SurTec 482	C - Corrosive	WHC 1

Warranty

We are responsible for our products in the context of the valid legal regulations. The warranty exclusively accesses for the delivered state of a product. Warranties and claims for damages after the subsequent treatment of our products do not exist. For details please consider our [general terms and conditions](#).

Further Information and Contact

In our forum, you can discuss topics of the surface technology:
<http://forum.SurTec.com/>

If you have any questions concerning the process, please contact your local technical department: <http://SurTec.com/International.html>