SurTec® 495 L
Liquid Desmutting for Aluminium

Properties

- suited for spray- and immersion process
- highly concentrated liquid product
- easy to handle
- removes even hard etching residues and oxides
- suited for highly alloyed and copper containing aluminium

Application

make-up values:	*immersion*		*spray*	
SurTec 495 L	17 %vol	(10-25 %vol)	10 %vol	(5-20 %vol)
application time:	3 min	(2-10 min)	60 s	(30-120 s)

temperature:	23°C	(15-28°C)
spraying pressure:	1 bar	(0.5-2 bar)
agitation:	air agitation	
tank material:	steel with acid and fluoride resistant coating	
heating:	not required	
exhaust:	recommended for worker's protection	
hint:	A slight turbidity of the bath solution will not disturb the desmutting process.	

recommended process sequence (for aluminium parts):

1. immersion cleaning SurTec 133
2. alkaline etching SurTec 181
3. desmutting SurTec 495 L
4. passivation SurTec 650 chromitAL
5. rinse with deionised water (max. 30 µS/cm)
6. hot air drying at max. 65°C

Between each step, there has to be rinsed. The rinsing methods have to be adapted to the plating line.

Technical Specification

(at 20°C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 495 L	liquid, yellow-brown	1.367 (1.35-1.39)	< 1

Maintenance and Analysis

Analyse and adjust the concentration of SurTec 495 L 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 and decant or filter through a fluted filter.

SurTec 495 L – Analysis by Titration

reagents: 0.1 mol/l EDTA solution (Titriplex III)
sodium hydroxide solution (10 %)
indicator: 5-sulfo salicylic acid · 2 H_2O (2 % solution)

procedure:
1. Pipette 5 ml bath sample into a 250 ml Erlenmeyer flask.
2. Dilute to approx. 100 ml with deionised water.
3. Adjust the pH-value to pH 2.5 using 10 % sodium hydroxide solution.
4. Add 2 ml indicator solution.
5. Titrate with 0.1 mol/l EDTA solution from violet to yellow.

calculation: consumption in ml · 1.84 = %vol SurTec 495 L

Ingredients

- sulfuric acid
- fluorides
- nitrates

Consumption and Stock Keeping

The consumption depends heavily on the drag-out. To determine the exact amounts of drag-out see SurTec Technical Letter 11. The following values can be taken as estimated average consumption:

SurTec 495 L 40 ml per m^2 of treated surface

In order to prevent delays in the production process, per 1000 l bath the following amounts should be kept in stock:

SurTec 495 L 200 kg

Product Safety and Ecology

The safety instructions and the instructions for environmental protection have to be followed when handling the products in order to avoid hazards for people and environment. The EU Material Safety Data Sheets contain explicit details for this.

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

product	*hazard designation*	*water hazard class*
SurTec 495 L	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

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