

# SurTec® 490 P

## Desmutting Agent

### Properties

- powder
- free of chromium salts and nitrates
- specially suited for bleaching and neutralisation of aluminium alloys
- no formation of toxic or irritant emissions
- suitable for anodising bathes after degreasing or pickling

### Application

*For immersion application:*

make-up values:

SurTec 490 P	20-60 g/l
sulfuric acid	40-80 g/l

application time: 1-5 min (60-300 s)

pH-value: approx. 3 (at 20 °C and 100 g/l)

temperature: room temperature (20-25 °C)

agitation: air agitation is required

tank material: PP tanks, PVC tanks or steel tanks (alloy 316 L)  
or steel tanks with acid-resistant coating

heating: not recommended

exhaust: recommended, for worker's protection

hint: After neutralisation it is not necessary to rinse the parts  
prior to subsequent treatment.

### Technical Specification

(at 20 °C)	Appearance	Bulk density (kg/l)	pH-value (at 50 g/l)
SurTec 490 P	powder, white	1.050 (0.96-1.17)	2 (1.5-2.5)

### Maintenance and Analysis

Analyse and adjust the concentration of SurTec 490 P and of sulfuric acid 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 490 P – Analysis by Titration

reagents:	potassium iodide 0.1 N sodium thiosulfate solution ( $\text{Na}_2\text{S}_2\text{O}_3$ solution) indicator: starch solution
procedure:	1. Pipette 5 ml bath sample into a 250 ml Erlenmeyer flask. 2. Add 2 g potassium iodide. 3. Let react for 15 minutes in the dark. 4. Add some indicator. 5. Titrate with 0.1 mol/l sodium thiosulfate solution from violet to colourless-yellowish.
calculation:	consumption in ml $\cdot$ 2.282 = g/l SurTec 490 P

### Sulfuric Acid – Analysis by Titration

reagents:	1 mol/l sodium hydroxide solution (NaOH solution) indicator: methyl orange ( 0.04 %)
procedure:	1. Pipette 5 ml bath sample into a 250 ml Erlenmeyer flask. 2. Dilute with deionised water to approx. 55-65 ml. 3. Add some drops of indicator. 4. Titrate with 1 mol/l NaOH-solution to a colour change to yellow.
calculation:	consumption in ml $\cdot$ 9.8 = g/l sulfuric acid
nominal values:	40-80 g/l sulfuric acid 4.1-8.2 ml/l 1 mol/l NaOH solution

## Ingredients

- persulfate salts

## Consumption and Stock Keeping

The following value can be taken as estimated average consumption:

SurTec 490 P            approx. 10 g per  $\text{m}^2$

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

SurTec 490 P	60-120 kg
Sulfuric acid	90-150 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 490 P	Xn - Harmful O - Oxidizing	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>

12 May 2009/DK, WT