

# SurTec® 560

## Antitarnishing for Copper

### Properties

- liquid additive for the last rinse after copper plating and directly before drying
- deposits a thin invisible organic film, without any change of the appearance
- prevents tarnishing of copper for a long period of time even under tropical conditions (warm and high humidity)
- enhances the running off of rinsing water which results in faster drying
- neutral hydrous solution, free of complexing agents and hexavalent chromium
- has no bad effect on the soldering behaviour

### Application

SurTec 560 is applied in the last rinse after copper plating directly before drying.

make-up value: 1 %vol (0.5-3 %vol)

temperature: room temperature (20-50°C)

application time: 10-30 s

hint: Drag-in of acid into the SurTec 560 treatment solution would decrease the surface protection and should therefore be avoided.

### Maintenance and Analysis

Analyse and adjust the concentration of SurTec 560 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 560 – Analysis by Photometer

equipment: spectrophotometer or  
filter photometer with 257 nm filter unit  
100 ml volumetric flask  
10 mm quartz cuvette

procedure: Make an exact sample dilution of 1:50:

1. Pipette 2 ml bath sample into a 100 ml volumetric flask.
2. Fill up to 100 ml with deionised water.
3. Fill the dilution in a 10 mm quartz cuvette.
4. Measure in the photometer at 257 nm against deionised water as zero value.

calculation:  $\text{absorbance} \cdot 1.56 = \% \text{vol SurTec 560}$

## Technical Specification

| (at 20°C)  | Appearance           | Density (g/ml)    | pH-value (conc.) |
|------------|----------------------|-------------------|------------------|
| SurTec 560 | liquid, yellow-brown | 0.997 (0.97-1.01) | 6.5 (5.3-7.7)    |

## Stock Keeping

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

|            |       |
|------------|-------|
| SurTec 560 | 30 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 560     | Xi - Irritant             | 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>