

SurTec® 870 S

Fume Suppressant

For Decorative Chromium Processes

Properties

- free of PFOS containing substances
- liquid product
- reduces the surface tension and forms a foam layer on top of the electrolyte

Application

make-up value: 2 ml/l (1-3 ml/l)

make-up: Add SurTec 870 S Fume Suppressant directly into the readily prepared chromium bath.

hints: Before adding SurTec 870 S Fume Suppressant, clean the bath tank (+ equipment) and the anodes thoroughly and activate them. Otherwise the fume suppressant will do the cleaning and the smut will float on the top of the bath.

Before converting a chromium bath from a PFOS containing fume suppressant to SurTec 870 S, firstly reduce the foam layer on the top of the bath to a minimum by working out.

At first add only very small amounts of SurTec 870 S (approx. 0.5 ml/l) while controlling the foam formation.

recommendations: After a stock dosage of 2 ml/l SurTec 870 S work through the electrolyte for 15 min at 10 A/m².

While adding SurTec 870 S, stir well the electrolyte in order to avoid a local overdosage of SurTec 870 S.

Dark foam colouring indicates an overdosage, and the foam has to be removed mechanically for preventing any contact with the parts.

For continuous dosage of small addition amounts, an automatic dosage pump is recommended.

recommended process sequence for iron parts, decorative chromium:

1. hot degreasing
emulsifying: SurTec 188 + SurTec 415
demulsifying: SurTec 188 + SurTec 089
2. hydrochloric acid pickling with SurTec 424
3. anodic cleaning with SurTec 171
4. acid dip with SurTec 481
5. Semi Bright Nickel Process SurTec 854
6. Bright Nickel Process SurTec 855
7. Decorative Chromium Process SurTec 871 + **SurTec 870 S**
8. hot air drying

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 870 S	liquid, light green-blue	0.998 (0.95-1.05)	2.5 (1.5-3.5)

Maintenance and Analysis

Control the surface of the electrolyte regularly. The foam layer should be even thin but compact. Raise the concentration of SurTec 870 S if no closed foam covering is visible. Dose SurTec 870 S across the day according to the consumption.

Ingredients

- PFOS-free surfactants

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 desired amount increases with higher chromic acid concentration, higher temperature and higher current density of the bath.

The following values can be taken as estimated average consumption:

	<i>per week</i>	<i>per 10,000 Ah</i>
SurTec 870 S	1.2 ml/l	0.4 l

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

SurTec 870 S	50 kg
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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 870 S	-	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>