

SurTec® 600

Cleaner/Phosphating Agent for Spray Applications

Properties

- liquid
- one step cleaning and phosphating
- suitable for iron and steel
- high cleaning effect on aluminium and zinc
- suitable for plastic cleaning
- less sludge
- can be dosed automatically

Application

SurTec 600 is a cleaning and phosphating agent for iron and steel. SurTec 600 can be applied in spray processes. It can also be used to clean plastic parts.

Automatic dosage via pH-index provides easy bath control and low consumption.

For improved surface quality, rinsing is necessary.

Fe-Phosphating:

make-up value: 0.3-1 %vol

temperature: 40-90 °C

application time: 0.5-5 min

pH working range: pH 4.5-5.5

Before **starting the bath** adjust the pH-range with diluted NaOH.

For each litre of concentrate used for the new make-up, approx. 40 g NaOH are necessary to adjust to pH 4.5 (pre-dilute!).

tank material: By use of SurTec 600 for **Fe-phosphating** standard steel is sufficient as known from experience.

Cleaning of Plastic Parts:

make-up value: 0.5-2 %vol

temperature: 40-90 °C

application time: 0.5-5 min

pH working range: 2.0-2.5

tank material: For **cleaning of plastic** the use of steel with acid resistant coating, PP or stainless steel is recommended because of the higher concentrations and the lower pH-values.

Technical Specification

(at 20 °C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 600	liquid, yellowish	1.155 (1.14-1.17)	2.0 (1-3)

Maintenance and Analysis

For **cleaning of plastic** analyse and adjust the concentration of SurTec 600 and the pH-value regularly.

For **Fe-phosphating** the determination of the concentration by titration is only useful after the make-up of the bath **before** pH-correction. During service life the bath needs to be controlled only by the pH working range (4.5-5.5). For the dosage of SurTec 600 an automatic pH-controlled proportion unit is recommended.

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 600 – Analysis by Titration

reagents:	0.1 N sodium hydroxide solution indicator: phenolphthalein
procedure:	1. Pipette 10 ml bath sample into a 250 ml Erlenmeyer flask. 2. Dilute with 100 ml deionised water. 3. Add 3 drops of indicator. 4. Titrate with 0.1 N sodium hydroxide solution from clear to red.
calculation:	consumption in ml · 0.34 = %vol SurTec 600

pH-Correction

Measure the pH-value with a temperature compensated pH-meter at a homogeneously mixed position in the bath. Adjust the pH-value to the desired pH-range by adding SurTec 600 step by step (Fe-phosphating: pH 4.5-5.5; cleaning of plastic: pH 2.0-3.0).

Ingredients

- phosphates
- nonionic surfactants
- anionic 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](#).

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

SurTec 600 Cleaner/Phosphating Agent	30 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 600	-	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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