

SurTec® 199

Highly Alkaline Cleaner

Properties

- highly alkaline liquid
- free of cyanide, silicate and surfactants
- very good conductivity
- free of hard complexing agents
- in combination with SurTec 089 recyclable via membrane filtration or oil separator
- emulsifying in combination with SurTec 415
- sprayable in combination with SurTec 084 or SurTec 086
- suited for steel, iron, cast, zinc die cast, copper and other nonferrous metals

Application

In combination with surfactants, SurTec 199 is suited for the cleaning in immersion, ultrasonic and spray application. It is also used for electrolytical cleaning, including polarity reversal. Prepare the make-up with cold water, because the solution will heat up.

Examples in combination with SurTec 089 (immersion with or without ultrasonic):

make-up values:	<i>degreasing</i>	<i>dephosphating</i>
SurTec 089	0.1-1 %vol	0.1-1 %vol
SurTec 199	2 - 7 %vol	5 - 10 %vol
temperature:	50-80°C	50-80°C
application time:	2-10 min	5-30 min

Examples in combination with SurTec 084 or SurTec 086:

make-up values:	<i>spray application</i>	<i>dephosphating</i>
SurTec 084 or SurTec 086	0.1-1 %vol	0.1-1 %vol
SurTec 199	2 - 5 %vol	5 - 10 %vol
temperature:	50-80°C	50-80°C
application time:	2-10 min	5-30 min

Example for the application in electrolytical degreasing:

make-up value:	<i>degreasing with or without polarity reversal (e.g. for cleaning of printing cylinders)</i>	
SurTec 199	10-15 %vol	
temperature:	20-70°C	
application time:	1-5 min	

Technical Specification

(at 20°C)	Appearance	Density (g/ml)	pH-value (at 10 g/l)
SurTec 199	liquid, (light) yellow, clear	1.340 (1.32-1.36)	approx. 12.4

Maintenance and Analysis

Analyse and adjust the concentration of SurTec 199 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 199 – Analysis by Titration

reagents: 1 N hydrochloric or sulfuric acid
indicator: bromophenol blue

procedure: 1. Pipette 10 ml bath sample into a 250 ml Erlenmeyer flask.
2. Dilute to approx. 100 ml with deionised water.
3. Add 3 drops of indicator.
4. Titrate with 1 N acid from violet-blue to yellow.

calculation: consumption in ml · 1.293 = %vol SurTec 199

Ingredients

- potassium hydroxide
- amines
- salts of organic acids

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 199 60 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 199	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>