

SurTec® 192

Alkaline Cleaner Concentrate

Properties

- liquid
- alkaline
- contains silicates, free of surfactants
- to assemble to the ready-made bath with a base (NaOH, KOH) and a surfactant
- for hot and electrolytic degreasing
- suited for steel and iron parts, without base also suitable for brass, zinc die cast, aluminium and magnesium
- in combination with SurTec 089 demulsifying and recyclable via membrane filtration, separator or gravitation oil separator
- emulsifying in combination with SurTec 092 or SurTec 415
- for spray application in combination with SurTec 084 and SurTec 086, in combination with SurTec 085 suitable for compact lines with pressure flooding

Application

make-up values: **for iron parts:**
1-3 %vol SurTec 192
+ 3-5 % KOH or NaOH
(+ 0.1-1 %vol detergent booster)

for all materials:
2.5-6 %vol SurTec 192
(+ 0.1-1 %vol detergent booster)

for electrolytic cleaning:
3-5 %vol SurTec 192
+ 10 % KOH or NaOH
anodic for iron parts, cathodic for brass and zinc die cast
at room temperature to 40°C

temperature: 40-90°C

application time: 0.5-10 min

Technical Specification

(at 20 °C)	Appearance	Density (g/ml)	pH-value (at 10 g/l)
SurTec 192	liquid, yellowish-brown, clear - slightly turbid	1.381 (1.35-1.42)	~ 11

Maintenance and Analysis

Analyse and adjust the concentration of SurTec 192 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 192 – Analysis by Titration

(only if no base is added)

reagents: 0.1 N hydrochloric or nitric acid
indicator: methyl orange solution (0.04 %)

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 0.1 N acid from yellow-orange to red.

calculation: consumption in ml · 0.30 = %vol SurTec 192

SurTec 192 – Phosphate Analysis by Titration

SurTec analyses the phosphate content according to the instructions of Dr. Lange. The measuring range of this analysis is 6-60 mg/l phosphate (PO_4^{3-}).

equipment: Dr. Lange photometer test LCK 350
spectral photometer (Dr. Lange CADAS 100)
possible wave lengths: 850 nm, 890 nm and 695 nm
Other tests for analysing PO_4^{3-} are possible; the handling must be adapted to the used test method

procedure: 1. Dilute the bath sample 1:50 due to the measuring range. If using another photometer test adapt the dilution according to the measuring range.
2. Pipette 0.4 ml of this dilution in the cuvette, as prescribed.
3. Let the sample decompose by temperature (see instructions).
4. Add reagent B and unlock Dosicap C.
5. Measure the sample after 15 minutes.
Calculate the phosphate content according to the photometer type and the used wave length.

calculation: e.g. calculation for CADAS 100 (850 nm; 1:50 dilution) including dilution factor results in g/l PO_4^{3-} in the sample.
 $\text{g/l PO}_4^{3-} \cdot 2.25 = \% \text{vol SurTec 192}$

Ingredients

- phosphates
- silicates
- 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 192 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 192	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>

31 August 2010/DK, UK