

SurTec® 556

Inorganic Sealer

Properties

- forms an uniform and colourless film after drying
- the coating is not sticky and is dry to the touch
- heat resistance up to 180 °C
- especially suitable for zinc plated and passivated steel cast and barrel parts
- used in immersion and centrifuge process
- improves the corrosion resistance also after high thermal strain
- gives an uniform appearance and covers the iridescence of the passivation layer
- IMDS-number: 974606

Application

make-up value:	30 %vol SurTec 556	(20-40 %vol)
make-up:	Steps for make-up: 1. Fill SurTec 556 into the tank. 2. Check the pH-value of the deionised water and adjust it to 7-8. 3. Fill up with the adjusted deionised water while stirring vigorously.	
temperature:	room temperature	(10 - 50 °C)
drying temperature:	70 °C	(60-150 °C)
pH-value:	8-11 adjust with ammonia solution	
application time:	dip the parts into the process solution without staying time or spray the solution until all parts are wetted completely	
tank material:	plastic tank or steel tank with coating for barrel application: separate centrifuge	
filtration:	coarse filtration may be necessary, especially if acid is dragged in (precipitations)	
heating:	not necessary and not recommended	
exhaust:	for spray application recommended	
hints:	After treatment with SurTec 556, the parts should be dried immediately (at 60-150 °C). SurTec 556 and its solutions flocculate in acidic solutions. Therefore the pH-value of the make-up water must be higher than pH 7. Furthermore, care must be taken that SurTec 556 and its solutions are not mixed with acidic solutions, for instance in waste water tubes, to prevent undesired flocculation.	
removal:	The sealer can be removed in hot alkaline soak cleaning solution with concentration of at least 50 g/l NaOH and temperatures > 65 °C (e.g. 5 % NaOH + 1-3 % SurTec 188).	
storage:	Protect SurTec 556 from cold (storage not under + 6 °C).	

Technical Specification

(at 20 °C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 556	liquid, colourless, opaque	1.098 (1.05-1.15)	10.8 (9.5-11.5)

Maintenance and Analysis

Analyse and adjust the pH value and the concentration of SurTec 556 regularly.

Sample Preparation

Take a bath sample at a homogeneously mixed position and let it cool down to room temperature. Remove precipitations by (coarse) filtration.

SurTec 556 – Analysis by ISO 3251

Equipment:	clean bowl analytical balance
procedure:	1. Weigh out a clean empty bowl. 2. Pipette 10 ml bath sample into it. 3. Dry the sample at 120 °C for 2 h. 4. Weigh the bowl again.
calculation:	dry residue in g · 65.7 = %vol SurTec 556

Ingredients

- silicon compounds

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 556	300 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 556	-	WHC 1

The crack process of the dispersion can be done preferably using sulfuric acid and eventually an addition of a flocculation additive as SurTec 925.

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>

2 August 2010/DK, PV