SurTec® 555 S
Temper Resistant Sealer

Properties

- liquid dispersion of organic polymers and nano particles of silicium dioxide
- free of chromates
- suitable for trivalent blue passivations, Chomitings and trivalent black passivations as well as for hexavalent yellow and olive chromates
- usable for immersion and spray application
- produces a clear film
- heat resistant corrosion protection up to 24 hours at 120°C
- improves the corrosion protection by 100-200 h neutral salt spray, with respect to the used passivation treatment
- can be removed with the help of hot alkaline SurTec cleaners, especially in combination with SurTec 095 or SurTec 095 E
- Volvo-standard (soluble hexavalent chromium) is guaranteed, also by use of hexavalent chromatings
- IMDS-number: 974826

Application

SurTec 555 S can be applied in immersion and spray process.

make-up value:	20 %vol	(15-30 %vol)	
make-up:	Steps for make-up: 1. Fill SurTec 555 S into the tank. 2. Check the pH-value of the deionised water and adjust to pH 7-9. 3. Add the adjusted deionised water to the tank.		
temperature:	room temperature	(10-50°C)	do not heat the bath actively!
drying temperature:	70°C	(< 120°C)	
pH-value:	8-10 adjust with diluted ammonia, ethanol amine or SurTec 520 A		
application time:	immerse the parts completely into the process solution and take them out immediately without staying time; resp. spray the solution onto the parts until all parts are wetted completely		
tank material:	plastic tanks or steel tanks with plastic coating; for barrel application: separate centrifuges are necessary		
filtration:	continuous coarse filtration is recommended (depending on the drag-in of acid, which leads to precipitations)		
heating:	not necessary and not recommended		
exhaust:	required for spray application		

hints:	SurTec 555 S and its solutions flocculate in acidic solutions. Therefore, the pH-value of the make-up water must be higher than pH 7. Furthermore, take care that SurTec 555 S and its solutions are not mixed with acidic solutions in, for example, in waste water tubes, in order to prevent undesired flocculation which cannot be dissolved any more. However, this effect can be used for waste water treatment of SurTec 555 S (see “Product Safety and Ecology”). SurTec 555 S cannot be applied directly in the barrel line, because the whole barrel would be sealed, the pores would be closed and it is very difficult to remove. So SurTec 555 S has to be applied in separate centrifuges, where rotation speed and drying temperature can be varied. The centrifuge baskets have to be cleaned regularly (see "removal").
removal:	The sealer can be removed in hot soak cleaning solutions with caustic concentrations of at least 80 g/l NaOH and temperatures >75°C (e.g. 10 % NaOH + 1-3 % SurTec 188). The floating flakes must be filtered off.

Maintenance and Analysis

Check the pH-value regularly. Analyse and adjust the concentration of SurTec 555 S regularly.

Sample Preparation

Take a sample at a homogeneously mixed position. Let it cool down to room temperature. If bigger parts are in the sample, filtrate by coarse filtration.

SurTec 555 S – Analysis by Dry Residue (DIN ISO 3251)

equipment:
glass bowl
analytical balance
drying cupboard

procedure:
1. Weigh out a clean empty bowl.
2. Pipette 10 ml bath sample into the bowl.
3. Dry the sample 2 h at 120°C in a drying cupboard.
4. Weigh the bowl with the completely dry, cool sample again.

calculation: dry residue in g · 60.4 = %vol SurTec 555 S

Technical Specification

(at 20°C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 555 S	liquid, blue, slightly turbid - milky	1.032 (1.00-1.06)	10 (9-11)

Attention: SurTec 555 S may possibly jelly a little bit. That means not a loss of quality and can be changed to liquid state again by shaking or stirring.

Ingredients

- synthetic polymers
- nonionic surfactants
- silicium dioxide

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 555 S	125 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:

product	*hazard designation*	*water hazard class*
SurTec 555 S	-	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

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