

SurTec® 610 V

Grain Refiner for Zinc Phosphatings

Properties

- powder product
- used as a grain refiner prior to zinc phosphating
- contains titanium compounds which are easy to disperse in water, forming a stable colloidal solution
- produces uniform and well adherent zinc phosphate layers
- achieves a high density of nucleation sites, resulting in a fine-grained crystal structure
- promotes good corrosion resistance and paint adhesion

Application

SurTec 610 V is applied by immersion or spray processes prior to zinc phosphating.

make-up value:	1-2 g/l
analytical value:	15 Alkaline Points (AP) (10-20 AP)
make-up:	Dissolve SurTec 610 V in water with strong agitation.
temperature:	room temperature - 40 °C
application time:	30 s minimum
pH-value:	8.5-10.0
agitation:	necessary
tank material:	stainless steel
filtration:	not recommended
heating:	if necessary to preheat bulky parts, use stainless steel heaters
cooling:	not applicable
exhaust:	required for worker's protection

Technical Specification

(at 20 °C)	Appearance	Bulk Density (kg/l)	pH-value (at 10 g/l)
SurTec 610 V	powder, white	0.990-0.105	9.5 (8.5-10.5)

Maintenance and Analysis

In case of high throughput, it is recommended to make up a new bath once a week.

A new make-up also is recommended in case of a poor grain refinement of the zinc phosphate crystals or uneven crystallization.

Analyse and adjust the alkalinity 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.

Alkaline Points – Analysis by Titration

reagents: 0.1 N hydrochloric acid
indicator: bromophenol blue

procedure: 1. Pipette 100 ml bath sample into a 250 ml Erlenmeyer flask.
2. Add 5 drops of indicator.
3. Titrate with 0.1 N hydrochloric acid from blue-violet to yellow.

calculation: consumption in ml = Alkaline Points

correction: for each missing Alkaline Point: add 0.1 g/l SurTec 610 V

Ingredients

- titanium compounds

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 610 V Grain Refiner 2 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 610 V	Xi - Irritant	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>