BONDERITE

Technical Data Sheet

BONDERITE S-ST 9210

Known as Novastrip 9210
February 2021

PRODUCT DESCRIPTION

BONDERITE S-ST 9210 provides the following product characteristics:

Technology	Paint Stripper
Product Type	Alkaline Paint Stripper
Application	Spraying or dipping

BONDERITE S-ST 9210 is a high alkaline paint-stripper especially developed for the paint stripping of steel.

Application Areas:

BONDERITE S-ST 9210 should only be used for the industrial application.

BONDERITE S-ST 9210 removes most of the currently marketed paints.

It is used in a concentration of 300 to 500 g/L.

Higher and lower concentrations are possible.

The make-up concentration depends on the type of coating which should be removed, the plant technology as well as the possible paint stripping time.

The best suited concentration has to be determined in practice tests.

The paint stripping time can range from a few minutes to several hours.

To increase the paint stripping effectively a bath circulation is of advantage.

Following the paint stripping process the paint and product residues left on the surface are rinsed of with high pressure water.

To avoid corrosion due to the rinse, especially if the parts are to be interim stored for longer periods of time, a passivation is necessary.

Alternatively the passivation can already be added to the rinsing water.

A suited passivation product is e.g. BONDERITE S-FN 7400.

TECHNICAL DATA

Appearance	brown liquid
Composition	Alkalis, glycol derivates
Density at 20°C, g/cm³	1.39
Odour	product specific, mild
Temperature, °C	80 to 100
Frost Stability, °C	>-5

DIRECTIONS FOR USE

Preliminary Statement:
Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Bath Make-up:
The bath make-up is started with cold water to which the necessary amount of BONDERITE S-ST 9210 is added.
In immersion plants without bath agitation the bath should be homogenized by lowering and raising the baskets in and out of the bath.
Following this the bath is heated to working temperature.
In diluted BONDERITE S-ST 9210 immersion baths without bath agitation a deck layer (depot film) of active substance components separates on the bath surface.
In immersion baths or spray application with high agitation this depot phase is dispersed in the paint stripping bath.

Bath Control:
In order to maintain the paint stripping effectively we recommend the regular determination of the product concentration with titration factor and the determination of the depot phase.
To increase the bath life time the paint sludge should regularly be removed from the bath.
The sludge removal can be performed by e.g. elutriation.

Dosing Concentration:
The concentration determination is performed with a potentiometric titration to a pH-value of 8.5 with 1.0 N hydrochloric or sulphuric acid.

If no pH-measuring device is available then the titration can be performed using phenolphthalein indicator.

When using phenolphthalein, paint components may spoil the colour change.

Equipment:
sampling device
5 mL volumetric pipette
Burette
150 mL beaker glass, high form
pH-meter or phenolphthalein

Sample

Henkel

Chemicals:
sulphuric acid 0.5 mol/L (1.0 N)
or
hydrochloric 1.0 mol/L (1.0 N)

Application:
A 5 mL sample of BONDERITE S-ST 9210 bath solution (without the depot phase) is taken using a volumetric pipette and added into a 150 mL beaker glass.

The volume is supplemented with de-ionised water to 100 mL. Then we titrate to a pH-value of 8.5 or to the colour change from red to colourless with phenolphthalein.

Calculation:

Consumption (1.0 N acid) x factor 32.1 = g/L BONDERITE S-ST 9210 (~4%)

If the concentration BONDERITE S-ST 9210 is to low then the product should be supplemented.

To increase the concentration of BONDERITE S-ST 9210 by 10 g/L add 7.2 Litre (10 kg) BONDERITE S-ST 9210 for each m³ bath volume.

Equipment:
sampling tube
100 mL measuring cylinder

In immersion plants with high bath agitation the depot phase is dispersed in the paint stripping bath.

100 mL of the homogenous bath sample are filled into a 100 mL measuring cylinder.

After the sample has cooled off the depot phase can be visually determined as mL.

The depot phase should be approx.~10% of the product concentration.

A bath sample with a concentration of 500 g/L BONDERITE S-ST 9210 should have ~50 mL/L depot phase, this means that approximately 5 mL depot phase should separate to the surface in a 100 mL measuring cylinder.

Determination of the depot phase in immersion plants or spray application without bath agitation.

Glass pipe with a diameter of ~10 mm.

In immersion plants without bath agitation the depot phase separates to the bath surface.

A glass pipe is slowly immersed to underneath the depot phase.

Then the top is sealed and the pipe is slowly pulled up out of the bath until the phase border between the aqueous phase and the organic depot phase can be measured in cm.

The depot phase should be 10 % of the product concentration.

A paint stripping bath with a concentration of 500 g/L BONDERITE S-ST 9210 separates ~50 mm depot phase per m³ to a bath surface of 1m² .

Example for the calculation of the set point for the depot phase in mm:

$$\text{mm depot phase} = \frac{\text{BONDERITE S-ST 9210 [g/L] x bath volume [m³]}}{\text{10 x bath surface [m²]}}$$

If the depot phase concentration is to low or even entirely gone the paint stripping times are prolonged. Thus the depot phase should regularly be supplemented with BONDERITE S-AD 6. To increase the depot phase by 1 mm add 1 L of BONDERITE S-AD 6 for every m² bath surface.

Construction material:

Steel

Classification:
Please refer to the corresponding **Material Safety Data Sheets** for details on:
- **Hazards identification**
- **Transport information**
- **Regulatory information**

Storage:

Temperature, °C	At room temperature
Shelf life, months (in unopened original packaging)	12

Sapnonyx

ADDITIONAL INFORMATION

Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:
In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage
Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1.2

sapionyx