BONDERITE

Technical Data Sheet

BONDERITE S-ST 9040-2

October 2017

PRODUCT DESCRIPTION

BONDERITE S-ST 9040-2 provides the following product characteristics:

Technology	Paint Stripper
Product Type	Alkaline Paint Stripper
Application	Hot, automatic paint stripping

Stripping agents for hot immersion process in combination with an alkaline source (KOH) for iron and steel.

- Free of phenols, phenol-releasing substances, naphthols, aromatic compounds, chlorinated hydrocarbons, complexing agents and amines.
- Improves the stripping performance.
- Decreases the needed stripping time.
- Extends the bath life time.

TECHNICAL DATA

Composition:	Glycols, Surfactants
Appearance:	clear homogenous liquid
Density (20°C), g/cm³	~1.058
pH:	8 ± 0.5 (10g/L in DI-water)
Frost Resistance, °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:
(all given percentages refer to weight percentage)

- 30 % cold water
- 20 % BONDERITE S-ST 9040-2 and mix until homogeneous
- 50 % add carefully KOH (45 %) and mix until homogeneous

Possible range of ingredients for getting good stripping results:

23 to 37 % water
18 to 22 % BONDERITE S-ST 9040-2
45 to 55 % KOH (45 %)

Example for setting up a bath:

- Bath volume: 1,000 L
- densities (g/cm³):
  BONDERITE S-ST 9040-2 1.058
  KOH (45 %) 1.452
  Complete bath 1.2
- for 1,000 L bath volume 1,200 kg are needed:

1,200 kg x 0.3 = 360 kg = 360 L water
1,200 kg x 0.2 = 240 kg = 226.8 L BONDERITE S-ST 9040-2
1,200 kg x 0.5 = 600 kg = 413.2 L KOH 45 %

= 1,200 kg = 1,000 L

- Slight movement in the bath decreases stripping times.
- Rapid movement in the bath increases evaporation losses and therefore stripping times as well.
- The bath level has to be kept constant.
- The given concentration range of ingredients should be kept.

Operating Data:

Temperature	80 to 100 °C
Treatment time	A few minutes to a few hours, depending on thickness of layer and type of paint

Application:

1. Stripping
2. Rinsing, preferably with high pressure water
3. Passivation with
   3.1. BONDERITE S-FN 7400, if directly painted without temporary storage after drying
   3.2. Other suitable BONDERITE passivation products, if the part is temporarily stored.
   The remaining BONDERITE S-ST 9040-2 film prevents forming of rust and is rinsable with water in a later treatment step.
4. Drying

Alternative:

1. Stripping
2. Rinsing without drying
   The alkali film prevents corrosion and can be rinsed away with water further processing.

Replenishing:
If the stripping time is longer than proposed above the bath parameters should be controlled.
This depends on the usage of the bath and is advisable once or twice a week.
In relation to the missing alkalinity (s. bath control) KOH and BONDERITE S-ST 9040-2 should be added.

Sample

Henkel

Bath Control:
The measurement of the concentration of BONDERITE S-ST 9040-2 in the bath solution is not possible with simple analytical devices.

Therefore the concentration of the alkaline base is determined by titration and BONDERITE S-ST 9040-2 is added in relation to the missing KOH.

Titration

5 mL of cold bath solution are diluted with 100 mL of DI water.
As indicator phenolphthalein is used.
If the ingredients of the bath disturb the indicator a pH meter is recommended.
The end point is about pH = 9.5.
For the titration 1 mol/L hydrochloric acid is used.

Calculation

The consumption of mL refers to the percentage of KOH (45 %) multiplying it with a factor of 2.08

Example

- Consumption in mL: 24
- Calculation:
  24 ml x factor 2.08 = 49.92 about 50 % KOH (45 %)
- For each mL below 24 mL, add 17 L/m³ KOH (45 %) and 9.4 L/m³ BONDERITE S-ST 9040-2 to the bath.

Equipment:
Steel

Waste Water Treatment:
BONDERITE S-ST 9040-2 is used together with an alkaline source. Also the ingredients of the paints are enriched in the water. Therefore at least neutralisation and separation from the solids is required. Please refer to local water authorities.

- For the neutralisation of 1 kg KOH (45%) about 812 g of hydrochloric acid (36%) are needed.
- For the addition of the acid the bath has to be at room temperature.
- The acid has to be added in small portions under great care with good agitation.

Precautions:
When handling chemicals, notice the common measures of precaution. Put on respiratory protection, wear suitable protective gloves and goggles.

Storage:

Recommended storage temperature, °C	-5 to 50
Shelf-life (in unopened original packaging), months	36

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

ADDITIONAL INFORMATION

Disclaimer

Note:
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.
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Reference 0.0

Sample