

**BONDERITE C-AK 5**

November 2020

**PRODUCT DESCRIPTION**

BONDERITE C-AK 5 provides the following product characteristics:

<b>Technology</b>	Industrial Cleaner
<b>Product Type</b>	Alkaline Cleaner
<b>Application</b>	Parts Cleaning
Concentration	2 to 45%
Operating Temperature	60 to 100°C
Process Type	spray, immersion

BONDERITE C-AK 5 is an alkaline liquid cleaner containing surfactants.

**Application Areas:**

BONDERITE C-AK 5 is used for cleaning of metallic materials and it is particularly suitable for cast iron manufactures. Due to the high content of sequestering agents the product can be also used for de-phosphating, paint removal processes, etc..

**TECHNICAL DATA**

Appearance	clear brownish liquid
Specific weight, g/cm <sup>3</sup>	~1.34
pH-value (1%)	>13

**DIRECTIONS FOR USE****Preliminary Statement:**

Prior to use it is necessary to read the **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.

**Operating Data:**

BONDERITE C-AK 5 is used in aqueous solution by spray or immersion at the following indicative operating conditions:

Spray application	
Temperature °C	60 to 100
Treatment time, min.	1 to 3

Immersion application	
Temperature °C	60 to 100
Treatment time, min.	5 to 15

The operating concentration of BONDERITE C-AK 5 vary according to the applications:

Spray application	
Concentration, %	2 to 4
Immersion application	
Concentration, %	4 to 10
As de-phosphating agent	
Concentration, %	10 to 20
As paint removal or for particular applications	
Concentration, %	30 to 45

Specific working parameters will be defined case by case by our Technical Service according to different line operating conditions, different materials, the optimal concentration and the operating parameters.

**Bath Make-up:**

1. Fill the operating tank with water (previously heated to 50 °C) up to 2/3 volume.
2. Turn-on the recycling pump and heat up to working temperature.
3. Add slowly the required amount of BONDERITE C-AK 5.
4. Make the bath controls.

**Bath Control:**

BONDERITE C-AK 5 solution is controlled by titration of the free alkalinity

- Pipette 5 mL of operating bath into a 250 mL beaker or flask.
- Add 30 mL of DI water and 3 to 5 drops Phenolphthalein Indicator (0.3% hydro-alcoholic solution).
- Titrate slowly with 0.1 N H<sub>2</sub>SO<sub>4</sub> until the color turn from violet to colorless.

The number of 0.1 N H<sub>2</sub>SO<sub>4</sub> mL used for the titration is the Free Alkalinity pointage.

A standard 2 % bath (20 kg / 1000 L) has a Free Alkalinity value = 6 pts  
A standard 10 % bath (100 kg / 1000 L) has a Free Alkalinity value = 30 pts

For a concentration upper than 10 % we suggest to use 1 N H<sub>2</sub>SO<sub>4</sub>.

**Note:** 1 mL of 1 N H<sub>2</sub>SO<sub>4</sub> = 10 mL of 0,1 N H<sub>2</sub>SO<sub>4</sub>

**Replenishing:**

The bath has to be continuously controlled and the working parameters have to be maintained in the

right range during the start up by continuous additions of BONDERITE C-AK 5. Add approx. 3.5 kg of BONDERITE C-AK 5 for each 1,000 L of bath and for each missing point. When the product performances are not adequate the bath has to be completely renewed.

#### General Remarks:

Small differences in product aspect does not compromise its performances. Process tanks and the other parts of the plant can be made of carbon steel while the nozzles have to be made of stainless steel or anti-acid materials. The bath surface has to be kept free from oil or organic pollutants, by periodical skimming. When the bath is renewed it is advisable to eliminate the residual sludge and to wash accurately the tank.

#### Safety Information:

Refer to the Safety Data Sheet for product handling and treatment. The solution of BONDERITE C-AK 5 is alkaline and may cause irritation and burns in contact with eyes and skin. Therefore the use of suitable clothes is recommended. The exhausted bath and its rinses have to be treated in waste water treatment plant before discharging. The bath and relevant rinses need to be treated before discharge.

#### Classification:

Please refer to the corresponding **Safety Data Sheet** for details on:

**Hazards identification**

**Transport information**

**Regulatory information**

#### Storage:

Recommended Storage Temperature	5 to 40°C
Shelf-life	24
(in unopened original packaging)	

#### 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.

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Reference 1.0