

BONDERITE C-AK 1563 / 1563-1

Known as Ridoline 1563 / 1563-1
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PRODUCT DESCRIPTION

BONDERITE C-AK 1563 / 1563-1 provides the following product characteristics:

Technology	Industrial Cleaner
Product Type	Alkaline Cleaner
Application	Metal Pre-Treatment

BONDERITE C-AK 1563 / 1563-1 is a liquid alkaline cleaner based on polyacrylate and phosphate for steel, zinc plated steel and aluminium.

Application Areas:

BONDERITE C-AK 1563 / 1563-1 is used in spray- and spray/immersion processes. It must be combined with a suitable cleaning booster.

TECHNICAL DATA

Density at 20°C, g/cm ³	~1.39
pH-value (1% in DI water 20°C)	~11.6

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:

Depending on the substrate, make-up will be done with BONDERITE C-AK 1563 / 1563-1 or BONDERITE C-AK 1563 A.

Fill the tank with warm water, start pumping and add for a volume of 1,000 L:

Zinc plated steel and aluminum:

BONDERITE C-AK 1563 A	7.7 to 46.2 L = 10 to 60 kg
Cleaning booster	depends on requirements

Steel:

BONDERITE C-AK 1563	7.2 to 21.6 L = 10 to 30 kg
1563-1	
Cleaning booster	depends on requirements

Changes in the above mentioned process parameters may be necessary. They have to be evaluated individually and documented specifically for each line.

Operating Data:

Adjusting the following parameters could be necessary depending on the line conditions.

Total alkalinity:

BONDERITE C-AK 1563 A	3.8 to 22.8 mL
BONDERITE C-AK 1563 / 1563-1	4.8 to 14.4 mL

Free alkalinity:

BONDERITE C-AK 1563 A	1.2 to 7.2 mL
BONDERITE C-AK 1563 / 1563-1	2.0 to 6.0 mL

Temperature	50 to 80°C
Duration of treatment	1 to 5 min
Spray pressure	0.8 to 2.0 bar

Bath Control:

BONDERITE C-AK 1563 / 1563-1 solution is controlled by the following analysis:

Titration of total alkalinity:

Feed, mL	10
Titrant:	0.1 N hydrochloric or 0.1 N sulfuric acid
End point:	pH 3.6
Indicator:	Methyl orange (0.1 % alcoholic solution)

- Cool down bath solution to room temperature and pipette 10 mL bath solution into a clean 300 mL Erlenmeyer-flask.
- Add 50 mL deionized water.
- Add 4 to 5 drops of indicator.
- Titrate the solution with 0.1 N hydrochloric or 0.1 N sulfuric acid.
- The endpoint will be shown by a colour change from orange to red (pH: 3.6).
- The consumption of 0.1 N hydrochloric or 0.1 N sulfuric acid in mL is equal to the points of total alkalinity

Titration of free alkalinity:

Feed, mL	10
Titrant:	0.1 N hydrochloric or 0.1 N sulfuric acid
End point:	pH 8.5
Indicator:	phenolphthaleine (0.1% alcoholic solution)

- Cool down bath solution to room temperature and pipette 10 mL bath solution into a clean 300 mL Erlenmeyer-flask.
- Add 50 mL deionized water.
- Add 4 to 5 drops of indicator.
- Titrate the solution with 0.1 N hydrochloric or 0.1 N sulfuric acid.
- The endpoint will be shown by a colour change from pink to colourless (pH-value: 8.5).
- The consumption of 0.1 N hydrochloric or 0.1 N sulfuric acid in mL (A) is equal to the points of free alkalinity.
- After titration add to the same solution appr. 5 g solid NaF or KF and stir solution until it has completely dissolved. If aluminum is present the solution will again show a red-violet color.
- Then titrate in the same way like before to pH 8.5.
- Again NaF or KF is added to make sure that all aluminum has been titrated. The solution should stay colorless otherwise titrate again as described.

Measuring Al concentration:

Acid consumption = B mL

- $B \times 0.09 = \text{Al-concentration in g/L}$
- $A - B/3 = \text{Pointage Free Alkalinity}$

Calculation:**Replenishing:**

Replenishing is to be done with BONDERITE C-AK 1563 / 1563-1, irrespective of the substrates to be treated.

For each missing point for a volume of 1,000 L add:

Total alkalinity	1.5 L = 2.1kg
Free alkalinity	3.6 L = 5.0kg
Cleaning booster	depends on requirements

Classification:

Please refer to the corresponding **Material Safety Data**

Sheets for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Recommended Storage Temperature, °C	0 to 50
Shelf-life, months (in unopened original packaging)	36

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