

# BONDERITE C-AK 1563 / 1563-1

Known as Ridoline 1563 / 1563-1  
March 2021

## PRODUCT DESCRIPTION

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

<b>Technology</b>	Industrial Cleaner
<b>Product Type</b>	Alkaline Cleaner
<b>Application</b>	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 <sup>3</sup>	~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**

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Reference 1.0