

BONDERITE® C-AK ZX-1

Known as PARCO CLEANER ZX-1
January 2024

Product description

BONDERITE® C-AK ZX-1 provides the following product characteristics:

Technology	Alkaline cleaner
Product type	Liquid alkaline cleaner
Application	Metal pretreatment

BONDERITE® C-AK ZX-1 is designed to prepare aluminum, steel, electrogalvanized and hot dip galvanized surfaces to receive a conversion coating or prior to a plating operation. Applied by spray or immersion this strongly alkaline treatment is particularly recommended for use ahead of BONDERITE™ processes.

Direction 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.

Equipment:

The process tank, housing, pumps and piping for use with this solution may be constructed of mild steel. Maintenance will be simplified if nozzles are fabricated from 300 series stainless steel. The heat exchanger plates should be polished 316 stainless steel. If gas fired burner tubes are used, they should be made of schedule 80 mild steel pipe or equivalent. All process circulating pump seals, valve seats, door seals, and other elastomers which come in contact with the working process solution should be PTFE. FKM may be used but its life will be shorter. EPDM elastomers should be avoided.

Automatic process control equipment, which promotes consistent quality and controlled costs, is available for automatically controlling this process. Auxiliary equipment, which is engineered and specified for this process, include air operated chemical transfer pumps, chemical metering pumps, reliable level controls, solenoid valve assemblies and bulk storage tanks. All chemical pump seals, valve seats and other elastomers which come in contact with the concentrated solution can be PTFE or CSPE.

Your local sales representative should be consulted for information on Henkel's automatic process control equipment for this process and any additional questions.

Operating data:

Free alkalinity, points	Within ± 1 point of that gives the best results
Alkali ratio	Within range that maintains cleaning efficiency
Time (Spray), minutes	1/2 to 3
Time (Immersion), minutes	1/2 to 6
Temperature (Steel and Galvanized), °F	140° to 180°
Temperature (Aluminum Alloys), °F	120° to 140°

Bath make-up:

BONDERITE® C-AK ZX-1 (known as PARCO CLEANER ZX-1) will clean effectively over a wide concentration range. Our representative will assist in establishing the most effective concentration for each application.

1. Fill the tank about 3/4 full with cold water.
2. Add the recommended amount of BONDERITE® C-AK ZX-1, then heat to the operating temperature.
3. Buildup is usually in the range of 1 to 6 gallons per 100 gallons of working volume and is dependent upon the soil encountered, the metal being treated and the operating equipment and conditions.

Bath control:

Never pipet by mouth, use a pipet filler.

Free Alkali (for Aluminum):

1. Pipet a 10 ml sample into a 150-ml beaker.
2. Add 5 drops of Indicator 3, then titrate with Titrating Solution 20 until one drop discharges the last of the pink.
3. Record the ml used and substitute for "A" in the equation below.
4. To the same sample, add 5 ml Reagent Solution 37.
5. With an aged bath, the red color will reappear.
6. Re-zero the buret and again titrate with Titrating Solution 20 until one drop discharges the last of the pink.
7. Record the ml used and substitute for "B" in the equation below.

Free Alkali (points) = Titration "A" minus 1/3 Titration "B".

Free alkali range: within ± 1 point of the value which gives the best results.

To increase value 1 point: 0.2 gallon of BONDERITE® C-AK ZX-1 (known as PARCO CLEANER ZX-1) per 100 gallons of solution volume.

The free alkali points may be increased or reduced, depending upon the type of soil, the time available, and the characteristics of the equipment in which it is used. Your representative will determine the optimum operating parameters of free alkalinity and "B" titration for your particular operation.

Free Alkali (for Steel and Galvanized):

1. Pipet a 10 ml sample into a 150-ml beaker.
2. Add 5 drops of Indicator 3, then titrate with Titrating Solution 20 until one drop discharges the last of the pink.
3. The ml of Titrating Solution 20 used is the free alkali value in points.

Free alkali range: within ± 1 point of the value which gives the best results.

To increase value 1 point: 0.2 gallon of BONDERITE® C-AK ZX-1 (known as PARCO CLEANER ZX-1) per 100 gallons of solution volume.

The free alkali points may be increased or reduced, depending upon the type of soil, the time available, and the characteristics of the equipment in which it is used. Your representative will determine the optimum operating parameters of free alkalinity and "B" titration for your particular operation.

Total alkalinity:

1. Pipet a 10 ml sample into a 150-ml beaker.
2. Add 5 drops of Indicator 2, then titrate with Titrating Solution 20 from blue through green until one drop discharges the last of the green.
3. The ml of Titrating Solution 20 used is the free alkali value in points.
4. Record the total alkali value for use in determining the alkali ratio below.

Total Alkali/Free Alkali Ratio:

As the cleaner is used and becomes contaminated, the total alkali will rise. Thus, the ratio of the total alkali to free alkali will also rise and this becomes a useful measure of the degree of contamination of the cleaner. The cleaner solution should be overflowed at a rate which will keep the alkali ratio between the level which will interface with proper cleaning. Our representative will assist in establishing the operating limits.

Waste disposal information:

Applicable regulations covering disposal and discharge of chemicals should be consulted and followed. Disposal information for the chemical, in the form as supplied, is given on the Material Safety Data Sheet for the chemical.

The cleaner solution is alkaline. Neutralization may be required prior to discharge to the sewer. (Refer to Waste Treatment Information Bulletin WT1007, available on request).

The cleaner solution and sludge can contain ingredients other than those present in the chemical as supplied and analysis of the solution and/or sludge may be required prior to disposal.

Precautions:

When handling the chemical in the form as supplied, the precautionary, first aid and handling recommendations on the Safety Data Sheet for the product should be read, understood and followed.

Do not get in eyes, on skin or on clothing. In case of contact, follow the recommendations on the Material Safety Data Sheet for BONDERITE® C-AK ZX-1 (known as PARCO CLEANER ZX-1).

Classification:

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

Transport Regulations

Hazardous Information

Safety Regulations

Storage:

Extreme temperatures should be avoided when storing BONDERITE® C-AK ZX-1 . Indoor storage at or near ambient temperature is recommended.



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

Henkel AG & Co. KGaA
40191 Düsseldorf, Germany
Phone: +49-211-797-0

Henkel Corporation USA
Madison Heights, MI 48071
Phone: +1-248-583-9300

Henkel (China) Co. Ltd.
201203 Shanghai, China
Phone: +86.21.2891.8000

For more information, please contact us on www.henkel.com