

**BONDERITE C-AK 470**  
**ALKALINE CLEANER**  
(KNOWN AS PARCO CLEANER 470)

Issued 5/31/2013

**1. Introduction:**

BONDERITE C-AK 470 (known as PARCO CLEANER 470) is a heavy duty liquid alkaline cleaner designed for the cleaning of ferrous metals.

**2. Operating Summary:**

<b>Chemical:</b>	<b>Bath Preparation per 100 Gallons:</b>
BONDERITE C-AK 470 (known as PARCO CLEANER 470)	1.0 to 5.0 gallons

<b>Operation and Control:</b>	
Free Alkalinity:	7.5 to 37.5 points (mls)
Time (Spray):	30 to 120 seconds
Time (Immersion):	1 to 5 minutes
Temperature:	Ambient to 150° Fahrenheit

**3. Materials:**

BONDERITE C-AK 470 (known as PARCO CLEANER 470)  
Testing Reagents and Apparatus

**4. Equipment:**

The process tank, housing, pumps and piping for use with this solution may be constructed of mild steel or preferably of stainless steel. In spray applications, 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 Buna-N, PTFE or CSPE. FKM may be used but its life will be shorter. EPDM elastomers should be avoided.

All chemical pump seals, valve seats and other elastomers which come in contact with the concentrated solution should be PTFE or CSPE.

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.

Our sales representative should be consulted for information on Henkel Corporation automatic process control equipment for this process and any additional questions.



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### **5. Cleaning with BONDERITE C-AK 470 (known as PARCO CLEANER 470):**

Buildup:

BONDERITE C-AK 470 (known as PARCO CLEANER 470) will clean effectively over a wide concentration range. Our representative will assist in establishing the most effective concentration for each application.

Fill the tank about three-fourths full with cold water. Add the recommended amount of BONDERITE C-AK 470 (known as PARCO CLEANER 470), then heat to the operating temperature. Buildup is usually in the range of 1.0 to 5 gallons per 100 gallons of working volume and is dependent upon the soil encountered, the metal being treated and the operating equipment and conditions.

<b>Operation:</b>	
Time:	30 seconds to 5 minutes
Temperature:	Ambient - 150° F
Application:	Spray/Immersion

### **6. Testing and Control:**

Never pipette by mouth, use a pipette filler.

Free Alkali:

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

Please note that when processing high levels of aluminum metal, the free alkalinity test may need modification. See your Henkel Corporation representative for details.

Free alkali range: 7.5 to 37.5 points within  $\pm 1$  point of the value which gives the best results.

To increase free alkalinity value 1 point: Add 0.13 gallons of BONDERITE C-AK 470 (known as PARCO CLEANER 470) per 100 gallons of solution volume.

<b>Gallons per 100 gallons</b>	<b>Points</b>
1.0	7.5
2.0	15.0
3.0	22.5
4.0	30.0
5.0	37.5

Total Alkali:

Pipet a 10 ml sample into a 150-ml beaker. 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. The ml of Titrating Solution 20 used is the total alkali value in points. Record the total alkali value for use in determining the alkali ratio below.



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### 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.

### **7. After Cleaning:**

#### Water Rinsing:

After cleaning, the work is thoroughly rinsed with water. The rinse should be continuously overflowed and the overflow should be regulated with the rate of production so that the rinse never becomes excessively contaminated.

### **8. Storage Requirements:**

Extreme temperatures should be avoided when storing BONDERITE C-AK 470 (known as PARCO CLEANER 470). Indoor storage at or near ambient temperature is recommended.

### **9. 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.

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.

### **10. General Maintenance:**

During shut down periods, the bath should be overflowed to remove any soils that collect on top of the bath. Screens, nozzles, and risers should be checked regularly.

The build up of soils in the BONDERITE C-AK 470 (known as PARCO CLEANER 470) Cleaner tank may necessitate a bath discard and recharge. Discard frequency will depend upon production. Any scale build up in the tank should be removed by a suitable chemical or mechanical method.

### **11. Precautionary Information:**

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

The cleaner solution is alkaline and can cause irritation of the skin and eyes and may burn eyes. 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 470 (known as PARCO CLEANER 470).



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### Testing Reagents and Apparatus

(Order only those items which are not already on hand)

Code	Quantity	Item
592462	2*	Beaker - 150-ml
592477	1	Buret Assembly - 25-ml Automatic
592396	1 qt	Indicator 2 (Bromcresol green)
592398	1 qt	Indicator 3 (Phenolphthalein)
592475	2	Indicator Dropping Bottle
592492	2*	Pipet - 10-ml Volumetric
592494	1	Pipet Filler
592499	1	Pitcher – Graduated Plastic
592430	1 gal	Titration Solution 20 (0.1N H <sub>2</sub> SO <sub>4</sub> )

\* Includes one more than actually required, to allow for possible breakage.

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