

# BONDERITE C-AK 1208X

## ALKALINE CLEANER

(KNOWN AS PARCO CLEANER 1208X)

Issued 5/30/2013

### 1. Introduction:

BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) is a single package, liquid alkaline cleaner formulated for the removal of BONDERITE L-FM (known as BONDERLUBE) lubricants, BONDERITE M-ZN conversion coatings and other drawing compounds or oils from aluminum & stainless steel parts, baskets, racks and tumbling barrels. The cleaner may be applied by either spray or immersion.

### 2. Operating Summary:

<u>Chemical:</u>	<u>Bath Preparation per 100 Gallons:</u>
BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X):	132 to 158 pounds 10 to 12 gallons
<u>Operation and Control:</u>	
"Total" Concentration:	10 - 12%
Total Alkalinity	7.8 - 9.4
Time:	3 to 10 minutes
Temperature, Fahrenheit:	175 to 190°

### 3. Materials:

BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X)  
Testing Reagents and Apparatus

### 4. Equipment:

The process tank, housing, pumps and piping for use with this solution may be constructed of mild 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 PTFE or CSPE. EPDM elastomers should be avoided.



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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.

Our sales representative should be consulted for information on Henkel Surface Technologies automatic process control equipment for this process and any additional questions. For additional information on equipment, please consult your local sales representative.

### **5. Cleaning with the BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) Solution:**

#### Buildup:

Fill the tank 3/4 full with cool water and add required amount of BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) per 100 gallons of solution.

BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X): 132 to 158 pounds (10 to 12 gallons). Typical start-up build is 10% (v/v).

The correct amount is best determined by the cleaning application and types of soils to be removed. Fill the tank and heat to the operating temperature.

#### Operation:

##### Time:

3 to 10 minutes

##### Temperature:

175° to 190° Fahrenheit

#### Water Rinsing:

After cleaning, the parts are thoroughly rinsed with hot water. The rinse should be overflowed continuously at a rate which will keep it clean and free from scum and contamination.

The cleaner will gradually accumulate lubricant and other soils, and should be discarded when contamination interferes with cleaning. If excessive lubricant and/or scum floats on the surface, it should be skimmed to eliminate re-deposition.

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

As the bath is used, active ingredients are consumed and require replenishing. Bonderite®, Bonderlube®, aluminum and other soils (contamination) also build up in the bath. As the amount of contamination increases, the concentration of the BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) must also be increased to assure cleanability. The following testing procedures will help to maintain proper cleaning performance. Use the Free Alkalinity for aluminum cleaning applications and the Total Alkalinity for stainless steel applications.

#### Free Alkalinity

Use when BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) is used to clean aluminum parts.

Never pipet by mouth, use a pipet filler.

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**Titration A & B:**

Pipet a 25 ml sample of the BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) bath into a 250 ml Erlenmeyer flask. Add 25 ml of deionized water and 5 drops of Indicator 3. Titrate with Titrating Solution 60 until one drop discharges the last of the pink color. Record the ml of Titration Solution 60 used as the titration A, and substitute for "A" in the equation below.

To the same sample, add 10 ml Reagent Solution 37. With an aged bath, the pink color will reappear. Without re-zeroing burette, again titrate with Titrating Solution 60 until one drop discharges the last of the pink color. Record the total ml used as Titration B and substitute for "B" in the equation below.

Titration B - Titration A = Contamination Level

This contamination level will be used in the following chart to determine BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) concentrations and additions.

### F Factor

mls Contamination (B-A)	F Factor
0.0	3.3
0.1	2.8
0.2	2.4
0.3	2.1
0.4	1.9
0.5	1.7
0.6	1.6
0.7	1.5
0.8	1.4
0.9 to 1.0	1.3
1.1 to 1.2	1.2
1.3 to 1.5	1.1
1.6 to 2.0	1.0
2.1 to 2.9	0.9
>3.0	0.8

**Example:**

Titration A = 9.0, Titration B = 11.5

Contamination Level = B-A = 11.5 - 9.0 = 2.5

Therefore, using the chart above, the F Factor is 0.90.

**"Total" Concentration Calculation:**

"Total" Concentration is considered active concentration plus contamination. Once the F Factor is determined, the "Total" concentration can be calculated as follows:



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"Total" Concentration % = Titration A x F Factor

The "Total" concentration should be maintained at 10-12% minimum.

Example:

Titration A = 9.0, Titration B = 11.5, Contamination Level = 2.5, F Factor = 0.90.

"Total" Concentration % = A x F Factor = 9.0 x 0.90 = 8.1%

Additions:

To increase "Total" Concentration by 1%, add 1.0 gallon of BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) per 100 gallons bath.

Example:

The bath should be maintained at 10-12% "Total" concentration. Therefore, we need 10.0% - 8.1% = 1.9% "Total" Concentration increase, minimum, to return to specification. Therefore, 1.9 x 1.0 = 1.9 gallons of BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) per 100 gallons of bath.

As the cleaner is used and becomes contaminated, the contamination level will rise. The maximum contamination level may vary for each operation. Our representative will assist in establishing the maximum value. The bath solution may be periodically dumped or auto-drained to keep the contamination value from exceeding the maximum value determined for the operation.

The strength of BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) may also be increased or reduced, depending on the type of soil, the time available for cleaning, and the characteristics of the equipment in which it is used.

Total Alkalinity

Use when Parco Cleaner is used to clean stainless steel parts

Never pipet by mouth, use a pipet filler.

Pipet a 25 ml sample of the BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) bath into a 250 ml Erlenmeyer flask. Add 25 ml of deionized water and 5 drops of Indicator 11. Titrate with Titrating Solution 60 until one drop causes the redish - blue color to disappear. Record the volume of Titration Solution 60 used. The volume is equal to the Total Alkalinity Points.

To increase the Total Alkalinity by 1 point, add 10.6 pounds of BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) per 100 gallons or 0.8 gallons BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) / 100 gallons

### **7. 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 processing bath is alkaline. Neutralization may be required prior to discharge to the sewer. (Refer to Waste Treatment Information Bulletin WT1007, available on request.)

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The processing bath and sludge which accumulates in the bath 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.

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

BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) is a very concentrated liquid and may separate slightly at temperatures below 40° Fahrenheit. If the concentrate is subjected to these extreme temperatures during storage, bringing its temperature up to 90° and mixing prior to usage will restore the uniformity of the product. If possible, the BONDERITE C-AK 1208X (known as PARCO CLEANER 1208X) should be stored between 60° and 90° Fahrenheit.

### **9. Precautionary Information:**

When handling the chemical product used in this process, the first aid and handling recommendations on the Material Safety Data Sheet for the product should be read, understood and followed.

The processing bath is alkaline and can cause irritation of the skin and 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 1208X (known as PARCO CLEANER 1208X).

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### Testing Reagents and Apparatus

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

<u>Code</u>	<u>Quantity</u>	<u>Item</u>
592488 .....	2* .....	Erlenmeyer Flask, 250-ml
592477 .....	1 .....	Buret Assembly, 25-ml Automatic
592481 .....	2* .....	Graduated Cylinder, 25-ml
592398 .....	250 ml ....	Indicator 3 (phenolphthalein)
592402 .....	250 ml ....	Indicator 11 (bromophenol Blue)
592493 .....	2* .....	25-ml Volumetric Pipet
592494 .....	1 .....	Pipet Filler
594334 .....	1 .....	Thermometer, Floating
592440 .....	4.0 L .....	Titration Solution 60 (1.0N HCl)
592433 .....	4.0 L .....	Reagent Solution 37 (Potassium Fluoride, 15%)

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

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