

BONDERITE C-AK 305R
ALKALINE CLEANER
(KNOWN AS PARCO CLEANER 305R)

Issued 5/30/2013

1. Introduction:

BONDERITE C-AK 305R (known as PARCO CLEANER 305R) is designed to prepare aluminum surfaces. Applied by spray in sheet and stripline units, this strongly alkaline treatment is particularly recommended for use ahead of BONDERITE processes.

2. Operating Summary:

<u>Chemical:</u> BONDERITE C-AK 305R (known as PARCO CLEANER 305R)	<u>Bath Preparation per 100 Gallons:</u> 2 to 4 gallons
<u>Operation and Control:</u>	
Free Alkali	10 to 20 points (ml)
Time	5 to 25 seconds
Temperature	100° to 140° Fahrenheit

3. Materials:

BONDERITE C-AK 305R (known as PARCO CLEANER 305R)
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. 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 should be PTFE or CSPE.



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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 305R (known as PARCO CLEANER 305R) Solution:Buildup:

BONDERITE C-AK 305R (known as PARCO CLEANER 305R): 2 to 4 Gallons per 100 gallons.

Fill the tank about three-fourths full with cold water. Add the proper amount of chemical and stir or circulate to dissolve. Add sufficient water to bring the solution up to the working level and then heat to the operating temperature.

Operation:

Time: 5 seconds to 25 seconds

Temperature: 100° to 140° Fahrenheit.

The cleaning solution gradually accumulates grease and soil, and should be discarded when contamination interferes with conditioning. An AUTODRAINER® control continuously discards a portion of the solution, and its use is recommended.

After cleaning, the metal is thoroughly rinsed with one or more stages of sprayed hot water. The rinse should be overflowed continuously at a rate which will keep it clean and free from scum and contamination.

6. Testing and Control:

Never pipet by mouth, use a pipet filler.

Free Alkali:

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

Equation:

Free Alkali (points) = $A - B/3$

As the cleaning bath is used and becomes contaminated, the value of "B" will rise. For optimum cleaning performance, the value of "B" should not exceed the free alkali value of the bath. The maximum value for the "B" may vary for each operation. Our representative will assist in establishing the maximum value. The solution may be periodically dumped or continuously overflowed or autodrained to keep the value of "B" from exceeding the maximum value determined for the operation.

Free alkali range: Within ± 1.0 point of the value found to give the best results.

To increase value 1 point (ml): Add 0.2 gal of BONDERITE C-AK 305R (known as PARCO CLEANER 305R) per 100 gallons.



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The strength of the solution can be obtained from the table below.

<u>Solution Strength Table</u>	
<u>gal per</u> <u>100 gal</u>	<u>Points</u>
1	5
2	10
3	15
4	20

The cleaning solution strength 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.

7. Storage Requirements:

If BONDERITE C-AK 305R (known as PARCO CLEANER 305R) chemical is stored above 95° Fahrenheit, there may be some cloudiness and slight separation. If this condition occurs, the chemical should be returned to a temperature below 90° Fahrenheit and stirred thoroughly before using.

If this product does freeze after storage at low temperature, thaw in a warm place and stir thoroughly before using.

8. 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 and contains phosphate. Neutralization and/or waste treatment of rinse water or processing solution may be required prior to discharge to the sewer. (Refer to Waste Treatment Information Bulletin WT1007, available on request.)

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.

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 may cause irritation of the skin and eyes. Do not get in eyes, on skin or on clothing. Do not take internally. Wear face shield, rubber gloves and protective clothing when handling. In case of contact, follow the recommendations on the Material Safety Data Sheet for BONDERITE C-AK 305R (known as PARCO CLEANER 305R) Chemical.



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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>
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
595584	1	Pocket Thermometer (0-220°F)
592430	1 gal	Titrating Solution 20 (0.1N H ₂ SO ₄)

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

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Henkel Corporation | 32100 Stephenson Highway | Madison Heights, MI 48071
PHONE: (248) 583-9300 | FAX: (248) 583-2976 | www.henkelna.com/

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