

PARCO CLEANER 305

LIQUID ALKALINE SPRAY CLEANER

1. INTRODUCTION

Parco Cleaner 305 is a liquid alkaline cleaner designed to prepare steel surfaces to receive uniform and dense phosphate coatings. Applied by spray, the heavy duty alkaline treatment with excellent rinsing characteristics will etch galvanised and aluminium surfaces. When non-etching cleaning of galvanised and aluminium is needed, other cleaners should be used.

2. OPERATING SUMMARY

Chemical	Bath Preparation per 1,000 litres	
Parco Cleaner 305	Steel Only 10-40 litres	Steel & Galvanised 10-20 litres
Operation & Control		
Free Alkali Time Temperature	5.0 - 20.5 points (ml) 45 - 90 seconds 48 ± 8°C	

Typical Operation : 20 litres per 1,000 litres sprayed for 1 minute at 48°C.

3. MATERIALS

Parco Cleaner 305
 Testing Reagents & 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 fire burner tubes are used, they should be made of schedule 80 mild steel pipe or equivalent.

4. EQUIPMENT (Cont...)

All process circulating pump seals, valve seats, door seals and other elastomers which come in contact with the working process solution should be Teflon®. Viton® 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 Teflon or Hypalon.

Our sales representative should be consulted for information on automatic process control equipment for this process and any additional questions. In addition the "Parker Amchem Equipment Design Manual" may be consulted.

5. TREATING WITH THE PARCO CLEANER 305 SOLUTION**Build Up**

Concentration : 10-40 litres of **Parco Cleaner 305** per 1,000 litres of solution volume.

Fill the tank about 3/4's 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: 45 - 90 seconds
Temperature: $48 \pm 8^{\circ} \text{C}$

After the best values for the time and temperature have been established, they should be maintained closely. Temperature should be held within $\pm 3^{\circ}\text{C}$.

The cleaning solution gradually accumulates grease and soil and should be discarded when contamination interferes with cleaning. 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 two 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 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. Titrate with Titrating Solution 20 until one drop discharges the last of the pink colour. The ml of Titrating Solution 20 used is the Free Alkali in points.

Free Alkali (Cont...2)

Free Alkali range : Within \pm 1.0 point of the value found to give the best results.

To increase value 1 point : 2 litres of **Parco Cleaner 305** per 1,000 litres of solution volume.

The strength of the solution in litres per 1,000 litres of solution volume can be determined from the titration value in points using the table below:

Parco Cleaner 305 (litres per 1,000 litres)	Points
10	5.0
15	7.7
20	10.3
30	15.3
40	20.5

The strength may be increased or reduced, depending on the type of soil, the time available and the characteristics of the equipment in which it is used.

Total Alkali

Pipette 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 and the solution turns yellow. The ml of Titrating Solution 20 required indicates the Total Alkali value in points.

The Total Alkali value is used to calculate 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 in the cleaner solution.

Maximum Total Alkali/Free Alkali Ratio = Initial Total Alkali/Free Alkali value plus 1.5.

The maximum value for the Total Alkali/Free Alkali ratio will vary depending upon the metal mix, the type of soil on the metal surface and the cleaner solution operating temperature. Our representative will assist in establishing the maximum value.

The solution may be periodically dumped or continuously overflowed or autodraind to keep the Total Alkali to Free Alkali ratio from exceeding the maximum value determined for the operation.

7. STORAGE REQUIREMENTS

If **Parco Cleaner 305** is stored above 35°C, there may be some cloudiness and slight separation. If this condition occurs, the chemical should be returned to a temperature below 32°C 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. Neutralisation 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, 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 **Parco Cleaner 305**.

DISCLAIMER

Any information given is, to the best of our knowledge, the best currently available, with respect to our products and their use, but it is subject to revision as additional knowledge and experience is gained. Such information is offered as a guideline for experimentation only and is not to be construed as a representation that the material is suitable for any particular purpose or use. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use. This information is not a license to operate under nor is it intended to suggest infringement of any patent. We guarantee a uniform quality standard for this product. The only conditions and warranties accepted by Henkel in relation to this product or process are those implied by either Commonwealth or State statutes.