



# Carbon Colloid Cleaner

## Carbon Colloid Process

Code No.: REM 3315

**DESCRIPTION:** **Carbon Colloid Cleaner** is a single component, slightly alkaline solution designed to clean copper surfaces and condition dielectric surfaces of printed wiring boards. It is used in preparation for through-hole plating with the **Carbon Colloid Process**.

**PHYSICAL & CHEMICAL PROPERTIES:**

Appearance: Clear, Pale Yellow Liquid  
Odor: Mild Amine  
Freezing Temperature: 0°C  
Min. Storage Temperature: 5°C

**EQUIPMENT:**

Modules: Horizontal Conveyorized Equipment  
Polypropylene, 316 SS Construction  
Ventilation: Required  
Heaters: 316 SS, PTFE (Teflon)  
Filtration: Required when operated with ultrasonic solution agitation

Please contact your REM Representative for an approved horizontal conveyorized equipment vendor.

**MAKE-UP PROCEDURE:**

D.I. Water 95% by volume  
Carbon Colloid Cleaner 5.0% by volume



**OPERATING  
CONDITIONS:**

Temperature	51-57°C
Normality	0.17-0.22 N
pH	>9.6
Contact Time	30-60 sec.

**BATH  
MAINTENANCE &  
REPLENISHMENT:**

**I. Solution Normality**

**A. Reagents**

1. Hydrochloric Acid 0.100N
2. Methyl orange indicator solution 0.1% in Deionized water

**B. Procedure**

1. Pipette 10.0 ml of working solution into a 250 ml flask and add approximately 100 mL Deionized water.
2. Add 5 drops of methyl orange indicator solution and titrate with 0.1N HCl to the methyl orange (red) endpoint.

**C. Calculation**

$$\frac{(\text{mL of HCl}) \times (\text{N. of HCl})}{\text{sample size}} = \text{Normality of working solution}$$

**D. Replenishment**

$$(0.20 - \text{Normality}) \times 916 \times (\text{sump volume in gallons}) \\ = \text{mL of Carbon Colloid Cleaner}$$

**II. Solution pH**

**A. Procedure**

1. Calibrate a pH meter using pH 7.0 and 10.0 buffer solutions at ambient temperature.
2. Measure pH of Carbon Colloid Cleaner bath. (If ATC probe is not used, cool bath sample to ambient temperature prior to measuring pH).



**SOLUTION LIFE:**

REM recommends that the Carbon Colloid Cleaner bath be replaced after 275 surface square feet/gallon [660 dm<sup>2</sup>/L] of work has been processed.

**SAFETY & WARNING:**

REM recommends that the operator read and review the REM Material Safety Data Sheets for the appropriate health and safety warnings before use.

**Material Safety Data Sheets are available from REM company.**

**WASTE TREATMENT:**

Prior to using any recommendations for waste treatment, the user is required to know the appropriate local/state regulations for on-site or off-site treatment which may require permits. If there is any conflict regarding our recommendations, local/state regulations take precedent.

Spent Carbon Colloid Cleaner is mildly alkaline. Carbon Colloid Cleaner does not require special waste treatment procedures and can be treated in the same manner as other PCB alkaline cleaners.

**ORDER INFORMATION:**

<u>Product Name</u>	<u>Product Code</u>	<u>Container</u>
Carbon Colloid Cleaner	REM 3315	5 gal. (20 liters)