

OS304 Acid Cleaner

DESCRIPTION

OS304 Acid Cleaner is an extremely free rinsing cleaner for removal of chromates, fingerprints, shop soils, and oxides from copper and copper alloys. OS304 is nonetching, removing oxides with little or no attack on basis metal. It contains no chelating agents or other ingredients that complicate waste treatment. Dry films and primary image screening resists are not attacked by OS304 solutions.

OPERATING PARAMETERS

Concentration	5 to 20% by volume
Temperature	70°F to 140°F
Time	30 seconds to 5 minutes

PHYSICAL PROPERTIES

Fill tank about half full with water. Add the required amount of OS304. Add water to bring tank to operating level and stir to mix. Heat OS304 solution to desired temperature. For most printed circuit board operations 10% by volume OS304 at 120° F performs very well. Immerse parts in OS304 solution for 30 seconds to 5 minutes so that oxidation, shop soils, and fingerprints have been removed from the surface. Remove parts from the bath allowing excess solution to drain back into the tank. Thoroughly rinse in fresh water. Proceed immediately with plating or finishing operations.

CONTROL PROCEDURES

ANALYSIS

1. Place a 25 ml sample of OS304 bath into a 250 ml Erlenmeyer flask.
2. Add approximately 50 ml deionized or distilled water and 2 to 5 drops phenolphthalein indicator solution.
3. Titrate with 1N sodium hydroxide solution to the pink endpoint.
4. Calculations: $\text{ml sodium hydroxide} \times 0.59 = \% \text{ OS304}$

NOTES:



(1) If temperature of bath exceeds 150° F for an extended period of time, part of the wetting system may separate and float on the surface of the bath, appearing like an oily liquid. If separation occurs, **DO NOT** skim the wetting agent off the solution. Rather, allow the bath to cool to 140° F or lower and stir to recombine the bath.

(2) When aqueous dry film photoresist is used to define the area to be pattern plated, adhesion promoter from the dry film may be left on the surface after developing and cleaning. To assure complete removal of dry film adhesion promoter, etch approximately 10 millionths of an inch (10 microinches) of copper from the cleaned surface using OS-236, OS-242 or other suitable microetchant.

SAFETY AND STORAGE

Tanks made of PVC, polypropylene or glasses are preferred. Stainless steel and rubber lined steel tanks may also be used. Heaters should be quartz or Teflon coated. Do **NOT** use stainless steel sheathed heaters.

Contains strong acids. Protective clothing such as impervious gloves, apron, boots, and chemical goggles should be worn when handling this product. In case of accidental contact, flush immediately with water. For eye contact, flush with water for 15 minutes and seek medical attention immediately. OS304 is harmful if swallowed. Avoid breathing vapors or mists.

