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Product Data Sheet

Date: 03/19/09
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PRODUCT #: N8126

ULTRACLEAN NF

Non-Foaming Alkaline Spray Cleaner

DESCRIPTION:

Formulated to remove dirt, oil, fingerprints and other soils from copper surfaces without etching the copper. ***ULTRACLEAN NF*** is especially recommended for cleaning Invar/copper laminate and double treated copper foil. Also for use prior to resist lamination, oxide treatment and plating processes. Its non-chelating formula allows for easy waste treatment. ***ULTRACLEAN NF*** is non-foaming for use in conveyorized spray applications.

BENEFITS:

- **Convenient liquid concentrate**
- **Versatile for use in several process areas**
- **Very effective at removing organic contaminants**
- **Easy waste treatment**

SPECIFICATIONS:

Density:	1.11 gm/ml, 9.3 lbs./gal.
pH at 10% :	12
Flash Point (TCC):	None
VOC Content (EPA Method 24):	None
Appearance:	Clear, light yellow liquid
Shelf life:	Indefinite

INSTRUCTIONS:

Concentration:	5 - 10% by volume with water
Temperature:	90° - 130ºF
Dwell Time:	30 seconds - 2 minutes

Thorough rinsing after immersion is essential to remove solubilized contaminants. Follow with ***QUANTUM ETCH*** if a microetch is needed for maximum effectiveness.

Tanks or equipment should be constructed of polypropylene, PVC or CPVC. Heaters should be stainless steel or Teflon.

ULTRACLEAN NF will process 2000 square feet per gallon of concentrate.

CAUTIONS:

ULTRACLEAN NF is a concentrated alkaline solution. Contact with skin and eyes should be avoided. Wear goggles and gloves when handling this product. In case of contact with skin, flush immediately with water. For eye contact, flush immediately with water and obtain medical assistance. Refer to Material Safety Data Sheet for further information.

DISPOSAL: Neutralize and dispose of in accordance with all local, state and federal regulations.

ANALYSIS:

Equipment required:
10 ml Pipet
50 ml Buret
250 ml Erlenmeyer Flask

Reagents required:
0.1N Hydrochloric Acid
Methyl Orange Indicator
Distilled water

Procedure:

1. Pipet a 10 ml sample of working solution into a 250 ml Erlenmeyer flask. Add 50 ml distilled water.
2. Add 10-15 drops of Methyl Orange indicator and mix.
3. Titrate with 0.1N hydrochloric acid to a pink-orange end point.

Calculation: mls of HC1 X N of HCl X 3.44 = Percent ***ULTRACLEAN NF***