



RONACLEAN E950 LF

For Electronic Finishing Applications

Regional Product Availability

N.America	Japan/Korea	Asia	Europe
✓			

DESCRIPTION

Ronaclean E950 LF is an economical, low-foaming, high-detergent alkaline cleaner especially designed for high-speed applications. The best results are obtained when the Ronaclean E950 LF is operated anodically, however it can be operated cathodically or by simple immersion.

ADVANTAGES

- Low foaming
- High detergency
- Excellent primary cleaning of most metals
- Compatible with hard water
- Maintains detergency for long periods of time
- Non-chelated, allowing simple waste treatment

BATH MAKE-UP

Chemicals Required	Metric	(U.S.)
Deionized Water	900 ml/l	(90% v/v)
Ronaclean E950 LF	30–120 g/l	(4–16 oz./gal.)

MAKE-UP PROCEDURE

1. Add deionized water to tank.
2. SLOWLY add Ronaclean E950 LF to deionized water with constant mixing.

CAUTION: Ronaclean E950 LF is caustic and will generate heat when mixed with water. Mix thoroughly until all salts are completely dissolved.

3. Dilute to final volume with deionized water.

Copper and Copper Alloys Bath Operation—Metric

Parameter	Range	Recommended
Ronaclean E950 LF	40–60 g/l	45–60 g/l
Temperature	70–95°C	70–85°C
Agitation	Ultrasonic or solution movement by pump	
Current Density	1–5 A/dm ² (Cathodic)	
Time	30–120 seconds	

Note: Follow up with usual rinses and acid dips.

Copper and Copper Alloys Bath Operation—U.S.

Parameter	Range	Recommended
Ronaclean E950 LF	5.3–8.0 oz./gal.	6.0–8.0 oz./gal.
Temperature	158–203°F	158–185°F
Agitation	Ultrasonic or solution movement by pump	
Current Density	10–50 A/ft ² (Cathodic)	
Time	30–120 seconds	

Note: Follow up with usual rinses and acid dips.

Steel and Other Iron Alloys Bath Operation—Metric

Parameter	Range	Recommended
Ronaclean E950 LF	60–120 g/l	90 g/l
Temperature	70–90°C	80°C
Agitation	Ultrasonic or solution movement	
Current Density	5–10 A/dm ² (Anodic)	
Time	1–5 minutes	

RONACLEAN E950 LF

Steel and Other Iron Alloys Bath Operation—U.S.

Parameter	Range	Recommended
Ronaclean E950 LF	8–16 oz./gal.	12 oz./gal.
Temperature	160–195°F	175°F
Agitation	Ultrasonic or solution movement	
Current Density	50–100 A/ft ² (Anodic)	
Time	1–5 minutes	

Zinc Based Die Casting Bath Operation—Metric

Parameter	Range	Recommended
Ronaclean E950 LF	30–40 g/l	37.5 g/l
Temperature	55–65°C	60°C
Agitation	Ultrasonic or solution movement	
Current Density	1–5 A/dm ² (Anodic)	
Time	10–60 seconds Depending on condition of die casting	

BATH CONTROL OR STRENGTH PROCEDURE

DETERMINATION OF RONACLEAN E950 LF CONCENTRATION

I. Equipment

- 20 ml Transfer Pipette
- 250 ml Erlenmeyer Flask
- 50 ml Graduated Cylinder
- 50 ml Burette

II. Reagent

- Methyl Orange Indicator
- Titrant
- Hydrochloric acid, 1.0N

III. Procedure

- Pipette 20 ml of sample into a 250 ml Erlenmeyer flask.
- Add 50 ml of deionized water.
- Add 5–6 drops of methyl orange indicator.
- Titrate with 1.0N hydrochloric acid to a red endpoint.

IV. Calculation

Ronaclean E950 LF Concentration g/l =
ml Titrant x Normality x 2.48

Ronaclean E950 LF Concentration oz./gal. =
ml Titrant x Normality x 0.33

PRODUCT DATA

For the specific Product Data values, please refer to the Certificate of Analysis provided with the shipment of the product(s).

EQUIPMENT

Tanks: Stainless steel

Heaters: Stainless steel, quartz or teflon™
fluoropolymer-coated

EQUIPMENT PREPARATION

Prior to make-up, the process tank and ancillary equipment should be thoroughly cleaned and then leached with a sodium hydroxide solution.

This procedure is particularly important for new equipment or equipment previously used for other processes.

I. Cleaning Solution

- Trisodium Phosphate: 15 g/l (2 oz./gal.)
- Sodium Hydroxide: 15 g/l (2 oz./gal.)

II. Leaching Solution

Sodium Hydroxide: 10 g/l (1% wt/v)

RONACLEAN E950 LF

III. Procedure

- a) Thoroughly wash down tank and ancillary equipment with clean water.
- b) Recirculate water through the complete system to remove water soluble materials.
- c) Discard water.
- d) Add cleaning solution to the tank, heat to 55–60°C (130–140°F) and recirculate through the complete system.
- e) Discard cleaning solution.
- f) Recirculate water through the complete system.
- g) Discard water.
- h) Add leaching solution and recirculate through the complete system.
- i) Leave leaching solution in tank for minimum of 8 hours.
- j) Recirculate leaching solution through the complete system.
- k) Discard leaching solution.
- l) Recirculate water through the complete system.
- m) Discard water.

HANDLING PRECAUTIONS

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

CAUTION! Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

CAUTION! Failure to maintain proper volume level when using immersion heaters can expose tank and solution to excessive heat resulting in a possible combustion hazard, particularly when plastic tanks are used.

STORAGE

Store products in tightly closed original containers at temperatures recommended on the product label.

DISPOSAL CONSIDERATIONS


Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Rohm and Haas Electronic Materials Technical Representative for more information.

RONACLEAN E950 LF




ELECTRONIC MATERIALS

 Circuit Board Technologies

 CMP Technologies

 Flat Panel Display Technologies

 Microelectronic Technologies

 Packaging and Finishing Technologies

For locations and information please visit www.rohmhaas.com

Rohm and Haas and Rohm and Haas Electronic Materials are trademarks of Rohm and Haas Company, Philadelphia, PA, USA, or its affiliates.

UNITED STATES

Marlborough, MA

Tel: 800.832.6200

Fax: 508.485.9113

Freeport, NY

Tel: 800.645.2996

Fax: 516.868.8074

JAPAN

Tokyo

Tel: +81.3.5213.2910

Fax: +81.3.5213.2911

ASIA

Hong Kong

Tel: +852.2680.6888

Fax: +852.2680.6333

EUROPE

Paris, France

Tel: +33.1.40.02.54.00

Fax: +33.1.40.02.54.07

For Industrial Use Only. This information is based on our experience and is, to the best of our knowledge, true and accurate. However, since conditions for use and handling of products are beyond our control, we make no guarantee or warranty, expressed or implied, regarding the information, the use, handling, storage or possession of the products, or the applications of any process described herein or the results sought to be obtained. Nothing herein shall be construed as a recommendation to use any product in violation of any patent rights.