



RONACLEAN E950

For Electronic Finishing Applications

Regional Product Availability			
N.America	Japan/Korea	Asia	Europe
✓			

DESCRIPTION

Ronaclean E950 is an economical, heavy-duty, high-detergent alkaline cleaner especially designed for wire applications. The best results are obtained when the Ronaclean E950 is operated anodically. However, it can be operated cathodically or by simple immersion.

ADVANTAGES

- Excellent smut removal
- High-temperature capacity up to 95°C (200°F)
- Dustless, free-flowing and free-rinsing
- Compatible with hard water
- Maintains detergency for long periods of time
- Low-foaming and non-chelated allowing for simple waste treatment

BATH MAKE-UP

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

Refer to specific substrate for Ronaclean E950 solution make-up quantities.

MAKE-UP PROCEDURE

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

CAUTION! Ronaclean E950 is caustic and will generate heat upon contact 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	30–60 g/l	45 g/l
Temperature	70–82°C	76°C
Agitation	Ultrasonic or solution movement	
Current Density	1–5 A/dm ² (Anodic)	
Time	30–60 seconds	

Bath Operation—U.S.

Parameter	Range	Recommended
Ronaclean E950	4–8 oz./gal.	6 oz./gal.
Temperature	160–180°F	170°F
Agitation	Ultrasonic or solution movement	
Current Density	10–50 A/ft ² (Anodic)	
Time	30–60 seconds	

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STEEL AND OTHER IRON ALLOYS

Bath Operation—Metric		
Parameter	Range	Recommended
Ronaclean E950	60–120 g/l	90 g/l
Temperature	70–90°C	80°C
Agitation	Ultrasonic or solution movement	
Current Density	50–10 A/dm ² (Anodic)	
Time	1–5 minutes	

Bath Operation—U.S.		
Parameter	Range	Recommended
Ronaclean E950	8–16 g/l	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	

BATH MAINTENANCE

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Replenish Ronaclean E950 on the basis of analysis.

BATH CONTROL OR STRENGTH PROCEDURES

I. Equipment

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

II. Reagent

- Methyl Orange Indicator

III. Titrant

- Hydrochloric Acid, 1.0N

IV. 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 end.

V. Calculation

- Ronaclean E950 Concentration g/l =
ml Titrant × Normality × 2.24
- Ronaclean E950 Concentration oz./gal. =
ml Titrant × Normality × 0.30

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)

III. Procedure

- Thoroughly wash down tank and ancillary equipment with clean water.
- Recirculate water through the complete system to remove water soluble materials.
- Discard water.
- Add cleaning solution to the tank, heat to 55–60°C (130–140°F) and recirculate through the complete system.
- Discard cleaning solution.
- Recirculate water through the complete system.
- Discard water.
- Add leaching solution and recirculate through the complete system.
- Leave leaching solution in tank for minimum of 8 hours.
- Recirculate leaching solution through the complete system.
- Discard leaching solution.
- Recirculate water through the complete system.
- Discard water.

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PRODUCT DATA

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

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



 Circuit Board Technologies

 CMP Technologies

 Flat Panel Display Technologies

 Microelectronic Technologies

 Packaging and Finishing Technologies

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