



*High Performance Eco-Cleaning™*

# ECO-STENCIL™ RF

## Rinse-Free Batch Stencil Cleaner

### 1571



### Introduction

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Eco-Stencil RF is an effective non-flammable drop-in replacement for isopropyl alcohol (IPA) and other solvents commonly used in rinse-free batch stencil cleaning systems. Designed for ultrasonic and spray-in-air systems, Eco-Stencil RF batch stencil cleaner offers great cleaning performance with much lower environmental impact. Unique solvent and DI water blend is effective at removing a wide variety of solder paste (e.g. water-based, RMA, no-clean, lead-free) and uncured adhesives from stencils and misprinted boards. Higher concentration can be used for more difficult pastes and adhesives.

Eco-Stencil RF can be used in all the most popular cleaning equipment: Aqueous Technologies, Austin America Technologies, SmartSonic, EMC Global, and more. Eco-Stencil RF works with current filtration methods, providing a long bath life and minimized disposal cost.

Eco-Stencil RF batch stencil cleaner has been tested and proven compatible with every part of your stencil — from the frame, screen and stencil to the adhesives binding it together.

### Features / Benefits

- Rinse-free, drop-in replacement for IPA
- Quickly clean paste or uncured adhesive
- Effective on all solder pastes: lead, lead-free, aqueous, RMA & no-clean
- Safe for stencils, misprinted boards & cleaning equipment
- Biodegradable
- Non-flammable
- Lower VOC compare to IPA, zero GWP
- Non-ozone depleting
- Halide-free — prevents ionic contamination

### Applications

- For use in rinse-free batch stencil cleaners and acceptable to use batch cleaners with rinse.
- Dilution: recommended use concentration, 20%; Mix thoroughly.

### About TECHSPRAY RENEW™

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TECHSPRAY RENEW™ is a brand that represents **High Performance Eco-Cleaning™**. Techspray® has applied our expertise in solvent cleaning to formulate some of the most effective eco-friendly cleaners on the market. Performance is our top priority, using the best “green” solutions as they become available. We all are at the cusp of the ongoing movement toward sustainable products, packaging, and processes. It is Techspray’s intention to stay at the cutting-edge while keeping our products powerful and cost effective.

## Automatic Stencil Cleaner Guide

Key: ● = Best

⦿ = Acceptable

○ = No Recommended

Equipment Manufacturer	Equipment Type	1571	1572	1574
		Eco-Stencil RF	Eco-Stencil AQ	Eco-Stencil AQ2
Aqueous Technologies	Ultrasonic, no rinse (e.g. StencilWasher-ECO)	●	○	○
Austin American Technologies	Spray-in-air, rinse (e.g. X30A)	⦿	●	●
	Spray-in-air, rinse (e.g. X30C)	⦿	●	●
EMC Global	Spray-in-air, no rinse (e.g. Cyber Clean 1000)	●	○	○
	Spray-in-air, rinse (e.g. CyberClean 3000)	⦿	●	●
Kerry	Spray-in-air, rinse (e.g. Microclean SC1000)	●	●	○
Manncorp	Spray-in-air, rinse (e.g. 201SC)	⦿	●	●
	Ultrasonic, rinse (e.g. StencilWasher-ECO)	⦿	●	●
PresSure Products	Ultrasonic, no rinse (e.g. N29TP)	●	○	○
SmartSonic	Ultrasonic, rinse (e.g. Model 900)	⦿	●	●
	Ultrasonic, rinse (e.g. Model 2003)	⦿	●	●

## Directions

- **DILUTION: 1 PART ECO-STENCIL RF : 4 PARTS DI WATER**
- Used as directed in your batch stencil cleaner equipment instructions.
- Higher concentration can be used to clean more difficult soils or the increase cleaning speed.

## Refractive Index

Dilution	15%	16%	17%	18%	19%	20% (recommended)	21%	22%
ND	1.3489	1.3496	1.3506	1.3516	1.3527	1.3536	1.3545	1.3553
BRIX	10.6	11.1	11.7	12.4	13.1	13.7	14.3	14.8

## Chemical Properties

*Properties based on diluted material, as recommended for use in batch system. For Chemical Composition, refer to MSDS.*

- EXPOSURE LIMIT: Limits on components not established.  
Manufacturer's recommendation 1000 ppm.
- PHYSICAL STATE: Liquid
- ODOR: Faint ethereal odor
- APPEARANCE: Clear, mobile liquid
- COLOR: Clear
- pH: n/a (solvent-based)
- PERCENT VOLATILE: 100
- VAPOR PRESSURE: 0.045mmHg @ 20C (VOC Composite Vapor Pressure)
- BOILING POINT : 91°C (196°F)
- FLASHPOINT AND METHOD (TAG Closed Cup): None to boiling point
- SOLUBILITY IN WATER: Fully miscible
- EVAPORATION RATE: <1 (H<sub>2</sub>O=1)
- DENSITY: 0.95 at 25°C
- VOC: RTU @ 15%, 119.7g/L; @ 20%, 156.7g/L

## Compatibility

Eco-Stencil RF is compatible within normal operating conditions of batch stencil cleaning and with exposed materials normally found in the equipment and stencils.

### Common Stencil Materials

Key: *Excellent = no effect that impacts functionality*

Material	Compatibility
Aluminum frame	EXCELLENT
Stainless steel stencil	EXCELLENT
Epoxy strip adhesion to frame	EXCELLENT
Epoxy strip adhesion to screen	EXCELLENT
Epoxy adhesion between screen & stencil	EXCELLENT
Loctite 420 adhesive	EXCELLENT
Loctite Hysol 1C adhesive	EXCELLENT

Test method: 7 Days immersion at 37°C @20% concentration (more severe conditions than general operating parameters).

**Stencil identification:** Labels and permanent marker (e.g. Sharpie) may be removed by prolonged or repeat exposure to Eco-Stencil RF. Etching stencil identification into frame avoids this issue.

### Plastics

Key: *Excellent = no effect on stressed and unstressed plastic.*

Material	Compatibility
PTFE*	EXCELLENT
PVC-R*	EXCELLENT
HDPE*	EXCELLENT

Test method: 7 Days immersion at 37°C @20% concentration (more severe conditions than general operating parameters).

\* Common plastics in batch stencil cleaners

### Elastomers

Key: ● = Best, minimal swelling 0 - 10% / shrinkage < 2%  
 ○ = Acceptable, acceptable swelling 10.1 - 20% / shrinkage 2 - 5%

Material	Buna-N	Buna-S	Butyl rubber *	EPDM	Kalrez 6375	Kalrez 7075	Nat. gum rubber	Neoprene	Santoprene	Silicone *	Viton
Compatibility	○	●	●	●	●	●	○	○	○	●	○

Test method: 7 days immersion at 37°C (more severe conditions than general operating parameters).

\* Common elastomers in batch stencil cleaners

## Metals

Key: ● = Best, <.01 metal loss/change ● = Acceptable, <.02% metal loss/change ○ = Not Recommended

Material	Aluminum 2024 T3	Aluminum 6061 T6	Aluminum 7075	Brass foil	Copper foil	Galvanized Steel	Nickel 200	Stainless Steel 316*	Stainless Steel 304*
Compatibility	●	●	●	●	●	●	●	●	●

Product does not contain ingredients that affects material oxidation.

\* Common metals in batch stencil cleaners

## Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Eco-Stencil™ RF Cleaner is fully compliant with CARB (California Air Resource Board) requirements. Also compliant with European REACH (Registration, Evaluation, Authorization & Restriction of Chemicals) and WEEE (Waste Electrical and Electronic Equipment Directive) initiatives. It does not contain RoHS (Restriction of Hazardous Substances) restricted substances, SVHC (Substances of Very High Concern) list substances, or Halides.

Eco-Stencil™ RF Cleaner is a biodegradable, Halide-Free, zero GWP, non-Ozone depleting aqueous solution. Refer to MSDS for additional information.

## Packaging, Availability and Storage

Eco-Stencil™ RF Cleaner available in the following sizes:

1571-G	1 gallon (3.8L), makes 5 gal (19 L) @ 20%
1571-5G	5 gallon (19L), makes 25 gal (85 L) @ 20%
1571-54G	54 gallon (205L), makes 270 gal (1020 L) @ 20%
1571-15RTU-5G	5 gallon (19L) 15% Ready-To-Use concentration

Eco-Stencil™ RF is not considered perishable; a shelf life of 5-years can be anticipated with proper storage, 41-86°F (5-30°C), in its original sealed container.

## Resources

Techspray® products are supported by global sales, technical and customer services resources.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email [tsales@techspray.com](mailto:tsales@techspray.com) or visit our web site at: [www.techspray.com](http://www.techspray.com).

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### Countries Outside US

Call to locate a distributor  
in your country.

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