Eco-Stencil™ RF
Rinse-Free Batch Stencil Cleaner
Product# 1571

Product Description

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, Smart Sonic, 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

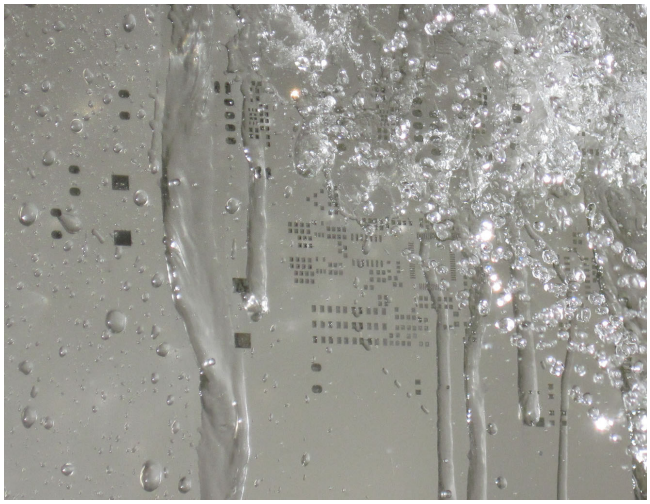
- Rinse-free, drop-in replacement for IPA
- Quickly clean paste or uncured adhesive
- Effective on all solder pastes: lead, lead-free, aqueous, RMA & no-clean
- Safe for stencils, misprinted boards & cleaning equipment
- Biodegradable
- Nonflammable
- Lower VOC compare to IPA, zero GWP
- Non-ozone depleting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

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.



Typical Product Data and Physical 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_2O=1)
DENSITY:	0.95 at 25°C
VOC:	RTU 16%, 80.0% concentrated by weight (EPA)
SHELF LIFE:	5 years unopened, 2 years open

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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.

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

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).

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*

Compatibility (cont.)

Elastomers

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

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

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, *<0.02% metal loss/change*
O = Not Recommended

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

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.

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Equipment Guide

Key: ● = Best ◘ = Acceptable ?? ○ = No Recommended

Equipment Manufacturer	Equipment Type	1571 Eco-Stencil RF
Aqueous Technologies	Ultrasonic, no rinse (e.g. Stencil Washer-ECO)	●
Austin American Technologies	Spray-in-air, rinse (e.g. X30A	◘
Austin American Technologies	Spray-in-air, rinse (e.g. X30C)	◘
EMC Global	Spray-in-air, no rinse (e.g. Cyber Clean 1000)	●
EMC Global	Spray-in-air, rinse (e.g. Cyber Clean 3000)	◘
Manncorp	Spray-in-air, rinse (e.g. 201SC)	◘
Manncorp	Ultrasonic, rinse (e.g. Stencil Washer ECO)	◘
PresSure Products	Ultrasonic, no rinse (e.g. N29TP)	●
SmartSonic	Ultrasonic, rinse (e.g. Model 900)	◘
SmartSonic	Ultrasonic, rinse (e.g. Model 2003)	◘

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 Halide-Free, zero GWP, non-Ozone depleting aqueous solution. Refer to MSDS for additional information.

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 or visit our web site at: www.techspray.com.

Important Notice to Purchaser/User: The information in this publication is based on tests that we believe are reliable. The results may vary due to differences in tests type and conditions. We recommend that each user evaluate the product to determine its suitability for the intended application. Conditions of use are outside our control and vary widely. Techspray's only obligation and your only solution is replacement of product that is shown to be defective when you receive it. In no case will Techspray® be liable for any special, incidental, or consequential damages based on breach of warranty, negligence or any other theory.

Packaging and Availability

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

1571-G	1 gallon (3.8L), makes 5 gal (19 L) @ 20%
1571-54G	54 gallon (205L), makes 270 gal (1020 L) @ 20%

TECHSPRAY

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