



Cactus Materials
LIMITLESS POSSIBILITIES

APEX EXPO 2018



@ Booth 313

Cactus Materials, Inc. along with Kaken-Tech Co. are bringing High Precision Cleaning Solutions & Equipment to the American market

Cactus Materials is an innovative technology company focusing on bringing disruptive solutions in the high precision cleaning market. Our key products are flux cleaning solutions, customizable cleaning equipment, and the never before seen in the American market – FlexiClean, a unique adhesive board designed for the removal of contaminants from rollers and other mechanical parts. These products have applications in the electronics, semiconductor, and packaging sectors.

Our products are designed around features that truly matter, such as effectiveness, efficiency, reliability, and environmentally-friendly.

Please visit www.cactusmaterials.com for more information, or for a soft-copy of our full catalog please email us at sales@cactusmaterials.com.

Cleaning Equipment

Microcleaner ECO

A highly reliable, yet cost-efficient high performance deflux cleaning systems which are **environmentally friendly** as they offer cleaning solution recyclability options. Our Microcleaners can be customized to better suit your engineering needs.



Pallet Cleaner

A soldering pallet cleaning system which requires only 1 minute to clean a pallet due to its excellent cleaning ability.



FlexiClean

FlexiClean specializes in removing contaminants (metal particles, dust, flux, etc.) that are attached to conveyor rollers or O-rings **WITHOUT** stopping the machine.

High heat resistant (250 – 270 °C) and high durability.



Above all, Cactus Materials is an engineering solutions provider. We work with partners and customers to design and develop new products and processes to meet your new product and developing process needs. Our products serve the electronics, packaging, ceramic components, semiconductor and medical sectors. Please email us at sales@cactusmaterials.com to receive the full catalog of all our products and components.



Cactus Materials

LIMITLESS POSSIBILITIES



High Precision Cleaning Solution

Clean isn't clean without the right cleaning solutions!

Features

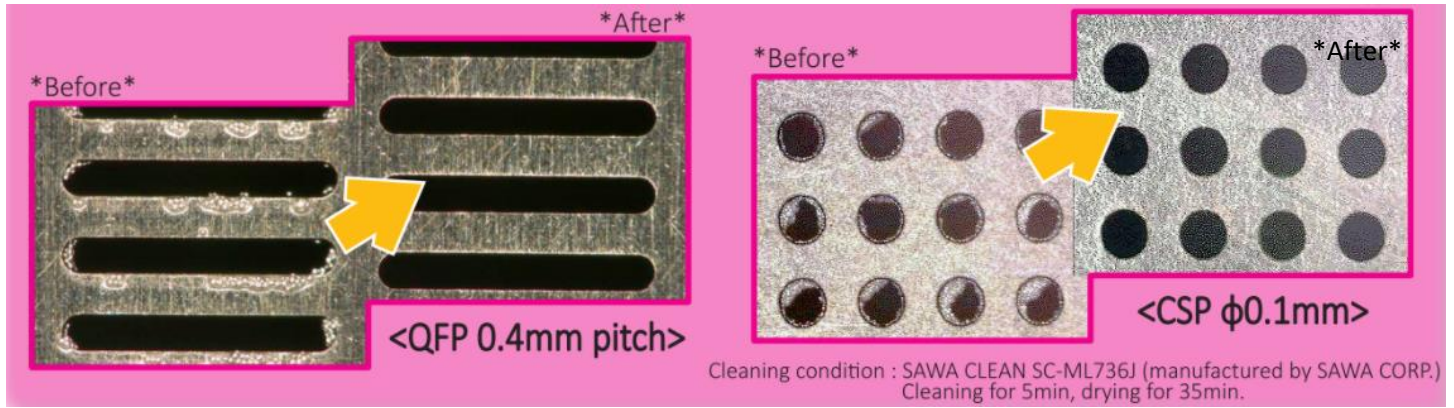
- ✓ Our cleaning solutions are capable of cleaning lead-free soldering flux residue resulting from high temperature soldering, unlike conventional glycol- or hydrocarbon-based solutions.
- ✓ Dries **4 times** faster than water, leaving no residue even in the gap underneath the microchip.
- ✓ **Superior cleaning ability and higher reliability** over aqueous solutions in removing flux residue.
- ✓ Complete recycling system reduces cost AND waste.

Cleaning Solutions Product Line Up

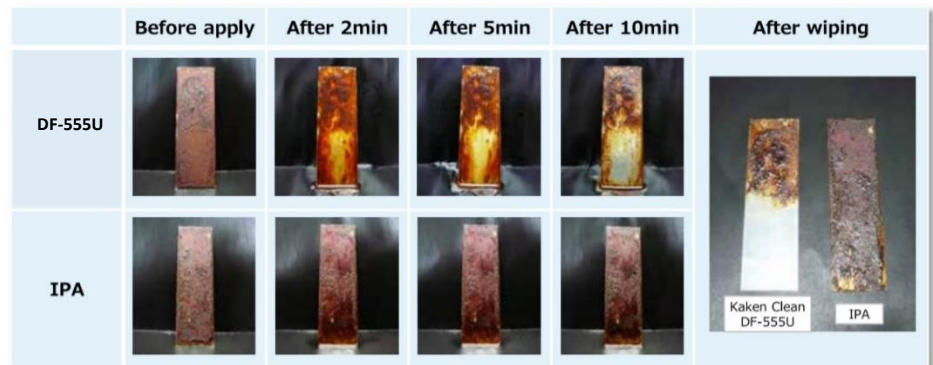
Use	Cleaning Item	Model No.	VOC Component (%)	UN Class	Flash Point (°C)	Boiling Point (°C)	Package (kg/can)	Features
Pallet and tooling	Flux	PA-2850U	100	3	51	120 - 204	17	High cleaning performance.
		PA-3200U	34	None	68	> 100	12	Non-hazard. Stirring required.
		PA-3980U	30	8	None	> 100	18	Less odor. Water-based.
		WE-3970U	90	8	None	> 100	17	Water diluted, less odor, stirring and water rinse required.
Metal mask	Solder paste ink	HA-1040U	100	3	29	120	16	Standard.
		HA-1245U	100	3	47	146	18	High cleaning performance.
		HA-4040U	85	None	None	> 100	17	Less odor, lower running cost than IPA.
		HA-2789U	34	None	97	> 100	12	Non-hazard, high cleaning performance, stirring required.
		HA-4045U	30	8	None	> 100	18	Less odor, water-based.
		HA-3396U	100	None	96	196	18	Less odor, uncured red glue cleaning, rinse required.
PCB	Flux	WS-1014U	100	None	117	> 200	16	Less damaging on PCB.
		WS-3220U	100	None	105	> 200	18	Standard.
		ST-05U	59	3	24.5	81 - 100	16	Superior rinse performance, fast drying.
		ECO-3002U	100	None	62	160 - 170	15	Water diluted, water rinse not required, designated cleaner for Microcleaner ECO.
		WE-3970U	90	8	None	> 100	17	Water diluted, less odor.

Cleaning Performance of Some Products

HA-4040U Cleaning Performance



Comparison of DF-555U Against IPA



The Cactus Materials Edge

Precision Cleaning Solutions

- Semiconductors
- Metals
- PCB defluxing

And many more...

Cleaning Equipment

- Microcleaner
ECO
- Pallet Cleaner

Technical Analysis

- Bath analysis
- Surface analysis
- Ion chromatography

And many more...



Cactus Materials

TK Paste – Conductive Adhesive

CR-2800/CN-3160L



TK silver powder

Introducing the **TK Paste**, a conductive adhesive developed using TK silver powder, the world's first thorny silver powder particles. TK Paste maximizes the advantages of TK silver powder by

- Forming a conductive path with small amounts of silver.
- Sintering at low temperatures.
- Possessing uniform particle diameter.

Features

- 1** Possible to reduce your costs 50% with the exclusive shape of silver powder
- 2** Best for earth grounding and EMI shielding
- 3** Curable at room temperature and even flexible after curing(CN-3160L)

Product Properties

Name	CR-2800	CN-3160L
Feature	Low cost/One-component, low temperature heat curing	Room temperature curing/One-component
Use	Earth, EMI shield	Earth, EMI shield
Resin	Epoxy resin	Thermoplastic resin
Silver content	50wt.%	58wt.%
Specific gravity	2.1	1.77
Specific resistance	$6 \times 10^{-3} \Omega \cdot \text{cm}$	$3 \times 10^{-3} \Omega \cdot \text{cm}$
Viscosity	30Pa · s	15Pa · s
Curing condition	90°C × 60min	25°C × 15min or 60°C × 2min
Storage condition	Under -10°C	Under 10°C
Package	200g bottle/10g syr	15g Al tube