

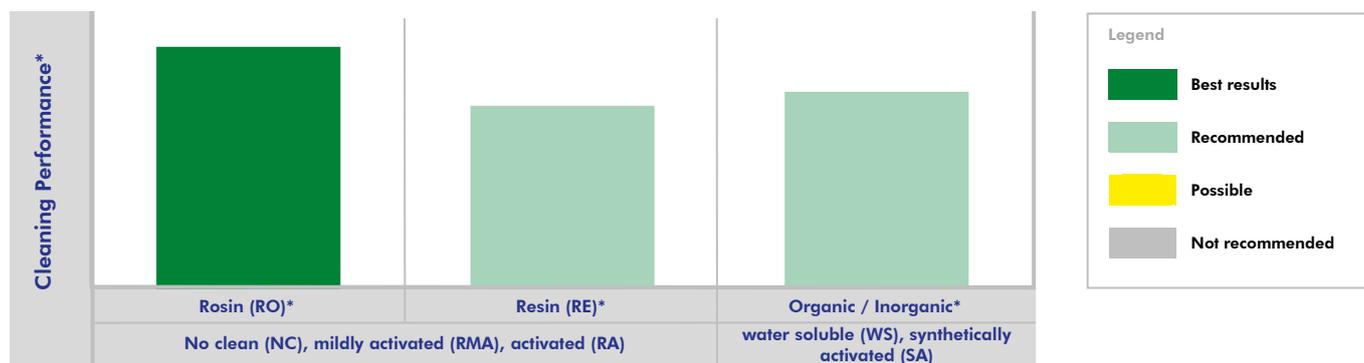
ZESTRON® FA+

Solvent for defluxing in semi-aqueous processes



ZESTRON® FA+ is a solvent-based cleaning agent designed to remove all types of flux residues from electronic assemblies, ceramic hybrids, power electronics (power modules, leadframe-based discretes, power LEDs) and packages (Flip Chips/CMOS). The product is characterized by its high cleaning performance and bath loading capability ensuring an extremely long bath life.

Areas of application – Defluxing of PCBAs, Power Electronics & Packages



* J-STD-004

Advantages compared to other cleaners

- High bath loading capability ensures extended bath life.
- The cleaning medium does not require any specific explosion-proof environment.
- Due to the surfactant-free formulation, ZESTRON® FA+ can be easily rinsed.
- Increases wire bonding/molding quality for power modules, leadframe-based discretes and Power LEDs.
- Ensures a void-free underfill and improves the image resolution by removing all tacky fluxes from Flip Chips/CMOS.
- This cleaning medium is listed in the ESA 'list of declared materials'.

Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Dip tank (Ultrasonic)	PCBAs, Hybrids, Power Modules, Leadframe-based discretes, Power LEDs, Flip Chips, CMOS	ZESTRON® FA+	DI-water	Hot air or circulating air
Dip tank (Spray-under-immersion)	PCBAs, Hybrids	ZESTRON® FA+	DI-water	Hot air or circulating air
Centrifugal cleaning	PCBAs, Hybrids	ZESTRON® FA+	DI-water	Hot air

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Machine Test Center



Analytical Center

Visit our Machine Test Center and clean your electronic assemblies in cleaning machines of leading international equipment suppliers.

Your benefits:

- You are introduced to the cleaning machines & you clean your PCBAs under production conditions supported by your ZESTRON process engineer
- You check the cleaning results immediately on site (ROSE, optionally IR, IC, SEM/EDX etc.) for maximum comparability & result transparency
- You receive a process guarantee including detailed process parameters for the machine/cleaner combination that we recommend

Contact ZESTRON's process engineers for cleaning trials:

Europe: Phone +49 (841) 63526; techsupport@zestron.com / South Asia: Phone +604 (3996) 100; support@zestronasia.com

Or visit our website for a virtual tour: <http://www.zestron.com/en/company/virtual-company-tour.html>

Technical Data

Density	(g/ccm) at 20°C/68°F	0.94
Surface tension	(mN/m) at 25°C/77°F	29.7
Boiling point	°C/°F	162 - 190°C / 324 - 374°F
Flash point	°C/°F	75°C / 167°F
pH value	10g/l H ₂ O	10.4
Vapor pressure	(mbar) at 20°C/68°F	0.47
Cleaning temperature	°C/°F	40 - 55°C / 104 - 131°F
Solubility in water		Soluble
Application concentration	Ready-to-use	Pure
HMIS Rating	Health-Flammability-Reactivity	1 - 2 - 0

Product Features & Cleaning Standards

	100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)	Electronic assemblies cleaned with ZESTRON® FA+ in a ZESTRON specified process meet the following industry standards: <ul style="list-style-type: none"> ▪ IPC-A-610 Visual cleanliness ▪ J-STD 001 Ionic and resin cleanliness ▪ IPC 5704 Cleanliness requirements for bare boards ▪ IPC-Hdbk-65B Guidelines for cleaning of printed boards and assemblies
	Extensively tested and suitable for cleaning lead-free solder pastes	
	Product is free of any critical substances according to SIN & SVHC lists	

Environmental, health & safety regulations

- ZESTRON® FA+ is biodegradable.
- ZESTRON® FA+ is formulated free of any halogenated compounds.
- Refer to the SDS for specific handling precautions and instructions.

Availability & Storage

1 Liter	✓
5 Liter	✓
25 Liter	✓
200 Liter	✓

- Available as ready-to-use solution
- Store ZESTRON® FA+ in the original container at a temperature between 5 - 30°C / 41 - 86°F.
- The product has a minimum shelf life of 5 years in factory sealed containers.



Further product information

- **Material Compatibility**
Please review the Material Compatibility overview before using the cleaning agent.
- **Filter recommendation**
To further extend the bath life of ZESTRON® FA+, filtration is recommended.
- **Safety data sheet**

Available Process–Optimization–Products

To ensure a stable running cleaning process, it is important to monitor cleaning agent concentration and regular bath treatment. For ZESTRON® FA+ the following process support product is available:



Cleaning agent regeneration:

- ZESTRON® Adsorber HM1 allows for the adsorption of heavy metals in your cleaning process when ZESTRON® FA+ is applied.