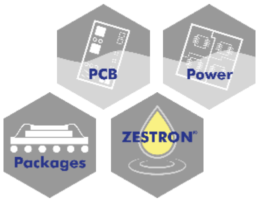

ZESTRON® FA$^+$

Solvent-based medium for PCB flux removal

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 PCBs, Power Electronics, and Packages

Recommended Solder Paste Applications:	Additional Product Information
No Clean (NC)	
Water Soluble (WS)	Material Compatibility Overview
Rosin (R)	
Rosin Mildly Activated (RMA)	Safety Data Sheet
Rosin Activated (RA)	

Applies to leaded and lead-free solder pastes and liquid fluxes

Key Benefits

- 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$^+$ is 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)	PCBs, 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)	PCBs, Hybrids	ZESTRON® FA$^+$	DI-water	Hot air or circulating air
Centrifugal cleaning	PCBs, Hybrids	ZESTRON® FA$^+$	DI-water	Hot air

Please refer to the Material Compatibility Overview prior to cleaning plastics.

Technical Data: ZESTRON® FA$^+$

Density	(g/cm^3) at 20°C/68°F	0.94
Surface tension	(mN/m) at 25°C/77°F	29.7
Boiling point	°C/°F	162 – 190 / 324 – 374
Flash point	°C/°F	75 / 167
pH value	10g/l H_2O	10.4
Vapor pressure	(mbar) at 20°C/68°F	0.47
Cleaning temperature	°C/°F	40 – 55 / 104 – 131
Solubility in water		Soluble
Application concentration	Ready-to-use	Pure
HMIS Rating	Health-Flammability-Reactivity	1 - 1 - 0

Product Features & Cleaning Standards

Extensively tested and suitable for cleaning of lead-free solder pastes

100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)

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.

Process Optimization

To ensure a stable running cleaning process, it is important to monitor cleaning agent concentration. 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.

Contact ZESTRON's Application Engineering Team for more information or trials:
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