

# ZESTRON® FA<sup>+</sup>

## Cleaning medium for PCB flux removal in SMT semi-aqueous processes



ZESTRON® FA<sup>+</sup> is a solvent-based cleaning agent designed to remove all types of flux residues from electronic assemblies, ceramic hybrids, power modules and leadframes. The product is characterized by its high cleaning performance and bath loading capability ensuring an extremely long bath life.

Areas of application: PCB's, ceramic hybrids, power modules, leadframes		Additional product information:
Low solid flux residues	++	<b>Technical Information 2:</b> Overview of all fluxes and solder pastes tested  <b>Technical Information 3:</b> Material compatibility overview  <b>Application Recommendation:</b> Specific process parameters for your cleaning trial
Rosin-based flux residues	++	
Water soluble flux residues	+	
Solder paste (unsoldered)	++	
SMT or conductive adhesives	+	

++ highly recommended, best results

+ recommended

0 possible

- not recommended

### Technical Centers - ① America, ② Europe, ③ Malaysia, ④ North-China, ⑤ South-China Cleaning Process Solutions under Production Floor Conditions



Contact ZESTRON's Process Engineering Team for free-of-charge cleaning trials:  
 Phone: +49-841-635-26; Email: [techsupport@zestron.com](mailto:techsupport@zestron.com)

### Advantages compared to other cleaners:

- High bath loading capability of ZESTRON® FA<sup>+</sup> ensures extended bath life.
- ZESTRON® FA<sup>+</sup> is based on non-halogenated, organic solvents.
- The cleaning medium does not require any specific explosion-proof environment.
- Due to the surfactant-free formulation, ZESTRON® FA<sup>+</sup> can be easily rinsed.
- ZESTRON® FA<sup>+</sup> can be used for the cleaning of ceramic substrates in thick film applications and for flip-chip applications in the semiconductor industry.
- ZESTRON® FA<sup>+</sup> has been EMPF Phase II tested and MIL approved.
- This cleaning medium is listed in the ESA 'list of declared materials'.

Please refer to the material compatibility list (Technical Information 3) before cleaning plastics.

ZESTRON® FA<sup>+</sup> is approved by leading international cleaning equipment manufacturers. Upon request written approvals can be obtained from ZESTRON.



Process Steps	1. Cleaning	2. Rinsing	3. Drying
Ultrasonic	ZESTRON® FA <sup>+</sup>	DI-water	Hot or circulated air
Spray-under-immersion	ZESTRON® FA <sup>+</sup>	DI-water	Hot or circulated air
Centrifugal cleaning	ZESTRON® FA <sup>+</sup>	DI-water	Hot air

Technical Data		
Density	(g/ccm) at 20°C/68°C	0.94
Surface tension	(mN/m) at 25°C/77°F	29.7
Boiling range	°C/°F	162 – 190 / 324 – 374
Flash point	°C/°F	75 / 167
pH-value	10g/l H <sub>2</sub> O	10.4
Vapor pressure	(mbar) bei 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 – 2 – 0

## PRODUCT FEATURES



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



Product is free of any critical substances according to SIN & SVHC lists



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

## Filter recommendation:

- To further improve the long bath life time for ZESTRON® FA<sup>+</sup> filtration is recommended.
- For details, please request our “Filter Recommendation” sheet.

## Environmental, health and safety regulations:

- ZESTRON® FA<sup>+</sup> is formulated free of any halogenated compounds and is biodegradable.
- Refer to the MSDS for specific handling precautions and instructions.

## Availability/Storage:

- ZESTRON® FA<sup>+</sup> is available as a ready-to-use solution in 1l bottles, 5l or 25l containers and 200l drums.
- The product is non-hazardous.
- Store ZESTRON® FA<sup>+</sup> 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.

## Cleaning Standards:

Electronic assemblies cleaned with ZESTRON® FA<sup>+</sup> in a ZESTRON specified process meet the following industry standards:

- IPC-A-610 Visual cleanliness
- J-STD 001 Ionic and resin cleanliness
- IPC-TM 650 and DIN 32513 (surface resistance)
- J-STD 003 Solderability

## Alternative product recommendation:

- For the removal of fluxes with an MPC® based medium in dip tanks we recommend VIGON® US.
- For cleaning in spray-in-air applications, we recommend VIGON® A 201.