Technical Information

ZESTRON
High Precision Cleaning

HYDRON® SE 230A

Water-based, alkaline defluxing agent for PCBs and semiconductor electronics

PCB
Power
Packages
Wafer
alkaline

HYDRON® SE 230A is a water-based, single-phase cleaning agent specifically developed for the use in dip tank processes. It removes flux residues from a wide range of PCBs and semiconductor electronics, such as leadframes, discrete devices, power modules, power LEDs, flip chips, and CMOS following the die attach process. The cleaning agent provides excellent deoxidation of copper substrates for subsequent processes such as wire bonding and molding.

Areas of Application: Defluxing of PCBs and semiconductor electronics

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

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

Key Benefits

- Features very low surface tension, ideal for cleaning capillary spaces (i.e. underneath low stand-off components)
- Due to its single-phase formulation, HYDRON® SE 230A can be easily processed and provides excellent performance in dip tank processes
- Exhibits a high level of material compatibility on sensitive materials such as copper, aluminum, nickel, etc.
- Retains activated copper surfaces over an extended period of time without risk of reoxidation
- Easily rinsed with DI-water yielding residue-free surfaces, has no flash point and low odor

Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Ultrasonic (US) / Spray under immersion (SUI)	PCBs, Leadframes, Discrete devices, Power modules, Power LEDs, Flip chips, CMOS	HYDRON® SE 230A	DI-water	Hot air or circulating air
Wafer processing equipment (spray, centrifugal)	Wafer	HYDRON® SE 230A	DI-water	Hot air or circulating air

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

Technical Data: HYDRON® SE 230A at 15% Concentration

Density	(g/cm^3) at 20°C/68°F	0.99
Surface tension	(mN/m) at 25°C/77°F	27.7
Boiling point	°C/°F	> 98 / > 208
Flash point	°C/°F	None until boiling
pH value	10g/l H_2O	9.6
Vapor pressure	(mbar) at 20°C/68°F	Approx. 20
Cleaning temperature	°C/°F	40 – 80 / 104 – 176
Solubility in water		Soluble
Application concentration[1]	Concentrate	15 – 30%
HMIS Rating	Health-Flammability-Reactivity	1 – 0 – 0

[1] HYDRON® SE 230A is recommended to be diluted in DI-water

Product Features & Cleaning Standards

HYDRON® Technology offers single-phase formulations and a good processability

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

- Biodegradable and environmentally friendly material.
- Formulated free of any halogenated compounds.
- Compliant with the latest ODS regulations and does not contain HAPs.
- Refer to the SDS for specific handling precautions and instructions.

Availability & Storage

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

- Available as concentrate
- Store HYDRON® SE 230A 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 HYDRON® SE 230A the following process support product is available:

Concentration measurement:

- ZESTRON® EYE for automated real-time concentration monitoring providing 100% traceability.
- ZESTRON® Bath Analyzer 20 is a manual test method for fast and reliable checks of cleaning agent concentration.

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