

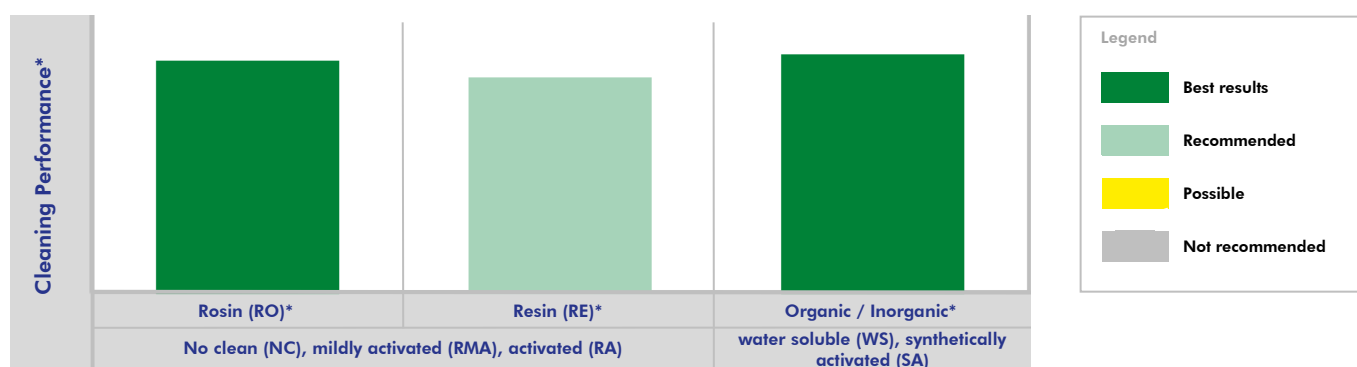
HYDRON® SE 230A

Alkaline defluxing agent for semiconductor electronics



HYDRON® SE 230A is a water-based, single-phase cleaning agent specifically developed for the use in dip tank processes. HYDRON® SE 230A reliably removes flux residues from all kind of semiconductor electronics, such as leadframes, discrete devices, power modules and power LEDs as well as flip chip or CMOS, i.e. after die attach. It provides excellent deoxidation of Cu substrates for subsequent processes such as wire bonding or molding. The cleaner is also recommended for defluxing after wafer bumping in single or batch wafer processing equipment.

Areas of application – Defluxing of Semiconductor Electronics



Advantages compared to other cleaners

- HYDRON® SE 230A provides stainless, activated copper surfaces for subsequent processes such as wire bonding, moulding and adhesive bonding and retains these activated surfaces over a temporary storage time.
- High level of material compatibility on sensitive materials such as copper, aluminum and specifically nickel.
- Featuring a very low surface tension, it works exceptionally well for cleaning capillary spaces, i.e. underneath low stand-off components.
- Provides excellent results for defluxing after wafer bumping in single & batch wafer processing equipment.
- Due to its single-phase formulation, it can be easily processed and provides excellent performance in dip tank processes.
- It can be easily rinsed off with DI-water without leaving any residues, has no flash point and a low odor.

Process Steps

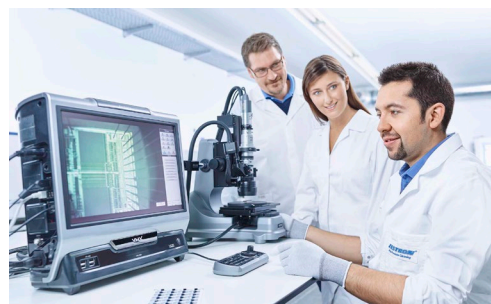
Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Ultrasonic (US) / Spray under immersion (SUI)	Power Modules, Leadframes, Discrete Devices, Power LEDs, Flip Chips, CMOS	HYDRON® SE 230A	DI-water ¹	Hot air or circulating air
Wafer processing equipment (spray, centrifugal)	Wafer	HYDRON® SE 230A	DI-water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

¹ The DI-water should have a temperature of 20-40°C/68-104°F.

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Machine Test Center



Analytical Center

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

Your benefits:

- You are introduced to the cleaning machines & you clean your power electronics 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: +49 8453 41995 318; techsupport@zestron.com / South Asia: +604 (3996) 100; support@zestronasia.com





Technical Data*

Density	(g/ccm) at 20°C/68°F	0.99
Surface tension	(mN/m) at 25°C/77°F	27.7
Boiling point	°C/°F	> 98°C / > 208°F
Flash point	°C/°F	None until boiling
pH value	10g/l H ₂ O	9.6
Vapor pressure	(mbar) at 20°C/68°F	Approx. 20
Cleaning temperature	°C/°F	40 - 60°C / 104 - 140°F
Solubility in water		Soluble
Application concentration ¹	Concentrate	15 - 30 %

* Please note that the following information represents HYDRON® SE 230A at 15 % concentration.

¹ The concentrate of HYDRON® SE 230A has to be diluted in DI-water.

Product Features & Cleaning Standards

	100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)	<p>Electronic assemblies cleaned with HYDRON® SE 230A in a ZESTRON specified process meet the following industry standards:</p> <ul style="list-style-type: none"> ■ IPC-A-610 Visual cleanliness ■ J-STD 001 Ionic and resin cleanliness and foreign object debris ■ IPC 5704 Cleanliness requirements for bare boards ■ IPC-Hdbk-65B Guidelines for cleaning of printed boards and assemblies <p>A cleaning process using HYDRON® SE 230A can help to reduce particle contamination.</p>
	Extensively tested and suitable for cleaning lead-free solder pastes	
	HYDRON® Technology offers single-phase formulations and a good processability	
	Product is free of any critical substances according to SIN & SVHC lists	

Environmental, health & safety regulations

- HYDRON® SE 230A is water-based and biodegradable.
- HYDRON® SE 230A is formulated free of any halogenated compounds and environmentally friendly.
- Refer to the MSDS 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.



Further product information

- **Material Compatibility**
Please review the Material Compatibility overview before using the cleaning agent.
- **HYDRON® Technology Sheet**
Detailed information on HYDRON® Technology
- **Filter recommendation**
To take full advantage of HYDRON® Technology and further extend the bath life of HYDRON® SE 230A, 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 HYDRON® SE 230A a variety of process support products are available:



Concentration measurement:

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