

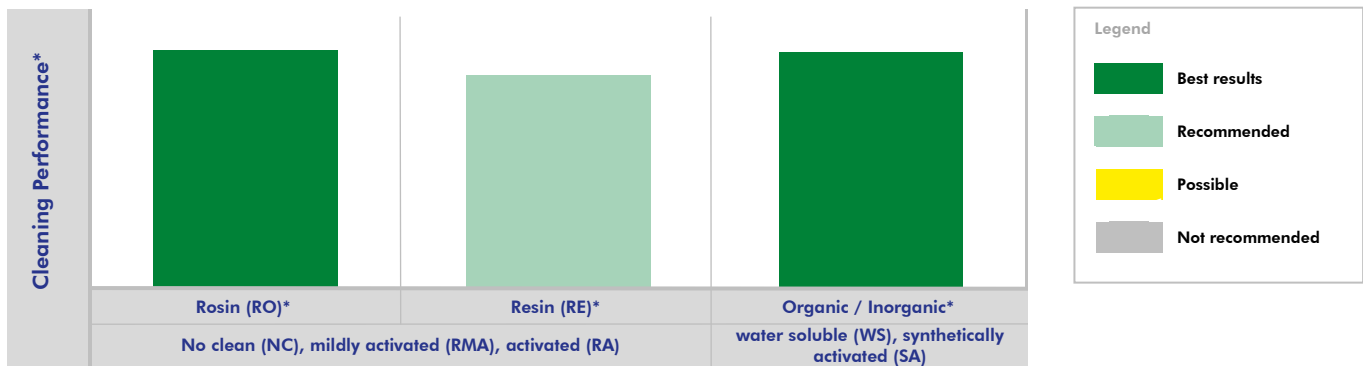
HYDRON® SE 235A



Alkaline defluxing agent for semiconductor electronics

HYDRON® SE 235A is a water-based, single-phase cleaning agent specifically developed for the use in dip tank processes. It shows an excellent cleaning performance even at low application temperatures. HYDRON® SE 235A was developed as ready-to-use cleaning agent, therefore no dilution and concentration monitoring is needed. HYDRON® SE 235A simultaneously provides exceptional material compatibility, copper deoxidation and prevents reoxidation of copper surfaces, resulting in optimally prepared surfaces for subsequent processes such as wire/adhesive bonding and molding.

Areas of application – Defluxing of Semiconductor Electronics



* J-STD-004

Advantages compared to other cleaners

- Excellent cleaning performance with all types of fluxes even at low application temperatures
- Due to its ready-to-use and single-phase formulation, HYDRON® SE 235A can be easily processed and provides excellent performance in dip tank processes.
- No dilution and concentration monitoring is necessary.
- Exceptional material compatibility on sensitive materials such as copper, aluminum and specifically nickel
- Provides stainless, activated copper surfaces for subsequent wire bonding, molding or adhesive bonding.
- Prevents reoxidation of Cu surfaces over an extended period of time.
- Due to its single-phase formulation, it can be rinsed off easily and residue-free.
- HYDRON® SE 235A has no flash point and does not require any specific explosion-proof environment.

Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Ultrasonic (US)	Leadframes, Discrete Devices, Power Modules, Power LEDs, Flip Chips, CMOS	HYDRON® SE 235A	DI-water ¹	Hot air or circulating air

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

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Machine Test Center



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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: 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/cm) at 20°C/68°F	0.99
Surface tension	(mN/m) at 25°C/77°F	26.7
Boiling point	°C/°F	> 100°C / > 212°F
Flash point	°C/°F	None until boiling
pH value	10g/l H ₂ O	9.7
Vapor pressure	(mbar) at 20°C/68°F	Approx. 20
Cleaning temperature	°C/°F	20 - 70°C / 68 - 158°F
Solubility in water		Soluble
Application concentration	Ready-to-use	Pure
HMIS Rating	Health-Flammability-Reactivity	1 - 0 - 0

Product Features & Cleaning Standards

<p>100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)</p>	<p>Electronic assemblies cleaned with HYDRON® SE 235A 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 235A can help to reduce particle contamination.</p>
<p>Extensively tested and suitable for cleaning lead-free solder pastes</p>	
<p>HYDRON® Technology offers single-phase formulations and a good processability</p>	
<p>Product is free of any critical substances according to SIN & SVHC lists</p>	

Environmental, health & safety regulations

- HYDRON® SE 235A is water-based and biodegradable.
- HYDRON® SE 235A 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 ready-to-use solution
- Store HYDRON® SE 235A 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 235A, filtration is recommended.
- **Safety data sheet**