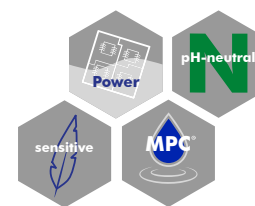


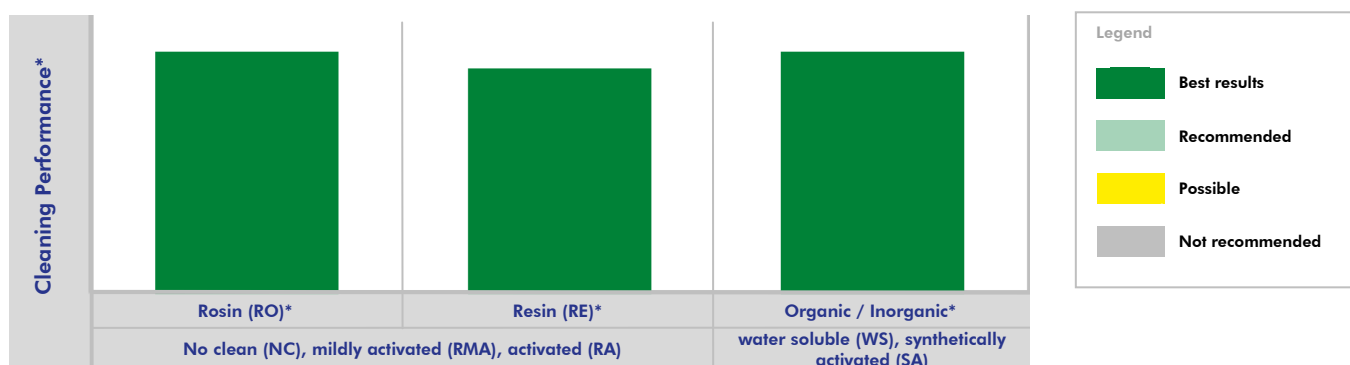
VIGON® PE 200

pH-neutral defluxing agent for power modules & LEDs, leadframes and discrete devices



VIGON® PE 200 is a water-based, pH-neutral cleaning agent specifically developed for the use in spray-in-air equipment. Based on the MPC®-Technology, VIGON® PE 200 reliably removes flux residues from leadframes, discrete devices, power modules and power LEDs, i.e. after die attach or heatsink soldering. The cleaning agent shows an excellent ability to remove oxide layers from copper surfaces to prepare for subsequent processes such as wire/adhesive bonding and molding.

Areas of application – Defluxing of Power Electronics



* J-STD-004

Advantages compared to other cleaners

- Provides stainless, activated copper surfaces for subsequent processes such as wire bonding, moulding and adhesive bonding.
- Retains activated surfaces over a temporary storage time.
- The cleaning agent is pH-neutral, therefore provides excellent material compatibility, specifically with dies, no attack of the passivation.
- Due to its MPC- formulation, VIGON® PE 200 can be effectively rinsed.
- VIGON® PE 200 has no flash point and thus can be applied in all spray-in-air equipment without explosion proof.
- The cleaning agent does not foam and has a low odor.

Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Spray-in-air (inline & batch)	Power Electronics	VIGON® PE 200	DI-water ¹	Hot air or circulating air
Dip tank ² (US / SUI)	Power Electronics	VIGON® PE 200	DI-water ¹	Hot air or circulating air

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

² To be tested depending on the parts and the cleaning equipment.

Independent Test Center - Largest choice of leading machines, chemistry & analytics



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: 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/ccm) at 20°C/68°F	0.99
Surface tension	(mN/m) at 25°C/77°F	29.2
Boiling point	°C/°F	> 98°C / > 208°F
Flash point	°C/°F	None until boiling
pH value	10g/l H ₂ O	Neutral
Vapor pressure	(mbar) at 20°C/68°F	Approx. 20
Cleaning temperature	°C/°F	40 - 70°C / 104 - 158°F
Solubility in water		Soluble
Application concentration ¹ (inline)	Concentrate	10 - 20 %
Application concentration ¹ (batch)	Concentrate	15 - 25 %
HMIS Rating	Health-Flammability-Reactivity	1 - 0 - 0

* Please note that the following information represents VIGON® PE 200 at 15 % concentration.

¹ The concentrate of VIGON® PE 200 has to be diluted in DI-water.

Product Features & Cleaning Standards

	100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)	Electronic assemblies cleaned with VIGON® PE 200 in a ZESTRON specified process meet the following industry standards: <ul style="list-style-type: none"> ▪ IPC-A-610 Visual cleanliness ▪ J-STD 001 Ionic and resin cleanliness ▪ IPC 5704 Cleanliness requirements for bare boards ▪ IPC-Hdbk-65B Guidelines for cleaning of printed boards and assemblies
	Extensively tested and suitable for cleaning lead-free solder pastes	
	MPC® Technology ensures an extremely long bath life when used in a closed loop system	
	Product is free of any critical substances according to SIN & SVHC lists	

Environmental, health & safety regulations

- VIGON® PE 200 is water-based and biodegradable.
- VIGON® PE 200 is formulated free of any halogenated compounds and environmentally friendly.
- Refer to the SDS for specific handling precautions and instructions.

Availability & Storage

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

- Available as concentrate
- Store VIGON® PE 200 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
- **MPC® Technology Sheet**
Detailed information on MPC® Technology
- **Filter recommendation**
To take full advantage of MPC® Technology and further extend the bath life of VIGON® PE 200, 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 VIGON® PE 200 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.



Cleaning agent regeneration:

- ZESTRON® Adsorber HM1 allows for the adsorption of heavy metals in your cleaning process when VIGON® PE 200 is applied.