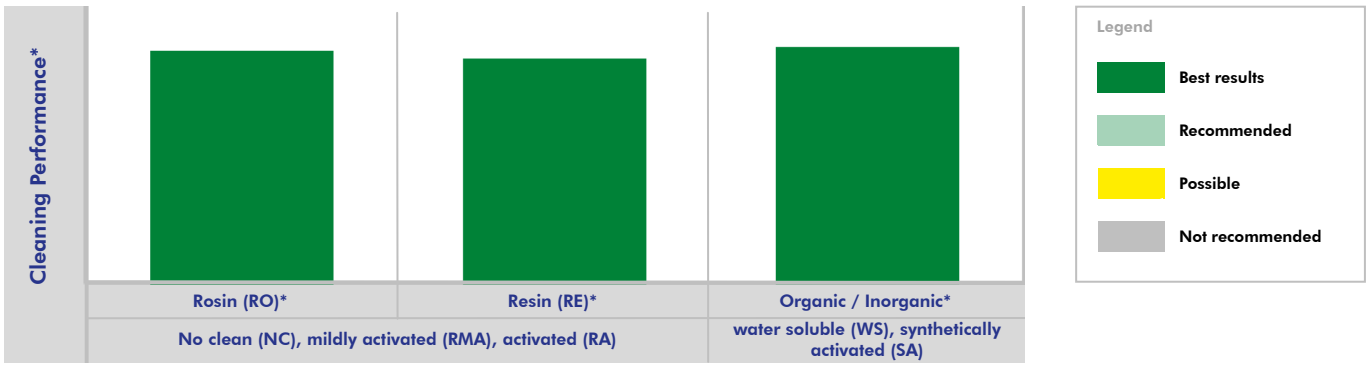
VIGON® PE 180

pH-neutral defluxing agent for Power Electronics and PCBAs

VIGON® PE 180 is a water-based, pH-neutral cleaning agent developed for defluxing Power Electronics and PCBAs in spray-in-air equipment. VIGON® PE 180 reliably removes flux residues and provides excellent material compatibility. It can be used for defluxing of leadframes, discrete devices, power modules, power LEDs as well as PCBAs and features good deoxidation of copper surfaces to prepare for subsequent processes such as wire/adhesive bonding and molding.

Areas of application – Defluxing of Power Electronics & PCBAs



* J-STD-004

Advantages compared to other cleaners

- Excellent defluxing performance on Power Electronics and PCBAs.
- Provides stainless, activated copper surfaces for subsequent processes such as wire bonding, moulding and adhesive bonding.
- pH-neutral formulation, thus it provides excellent material compatibility.
- Due to its MPC- formulation, VIGON® PE 180 can be effectively rinsed.
- VIGON® PE 180 has no flash point, does not foam and thus can be applied in all spray-in-air equipment without explosion proof.

Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Spray-in-air (inline & batch)	Power Electronics & PCBAs	VIGON® PE 180	DI-water[1]	Hot air or circulating air
Dip tank (US / SUI)	Power Electronics & PCBAs	VIGON® PE 180	DI-water[1]	Hot air or circulating air

[1] For cleaning Power Electronics, the DI-water temperature should be between 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/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_2O	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 180 at 15 % concentration.

[1] The concentrate of VIGON® PE 180 has to be diluted in DI-water.

Product Features & Cleaning Standards

RoHS & WEEE Compliant	100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)
PB lead-free	Extensively tested and suitable for cleaning lead-free solder pastes
MPC	MPC® Technology ensures an extremely long bath life when used in a closed loop system
Reach Compliant	Product is free of any critical substances according to SIN & SVHC lists

Electronic assemblies cleaned with VIGON® PE 180 in a ZESTRON specified process meet the following industry standards:

- 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

Environmental, health & safety regulations

- VIGON® PE 180 is water-based and biodegradable.
- VIGON® PE 180 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 180 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 180, 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 180 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.