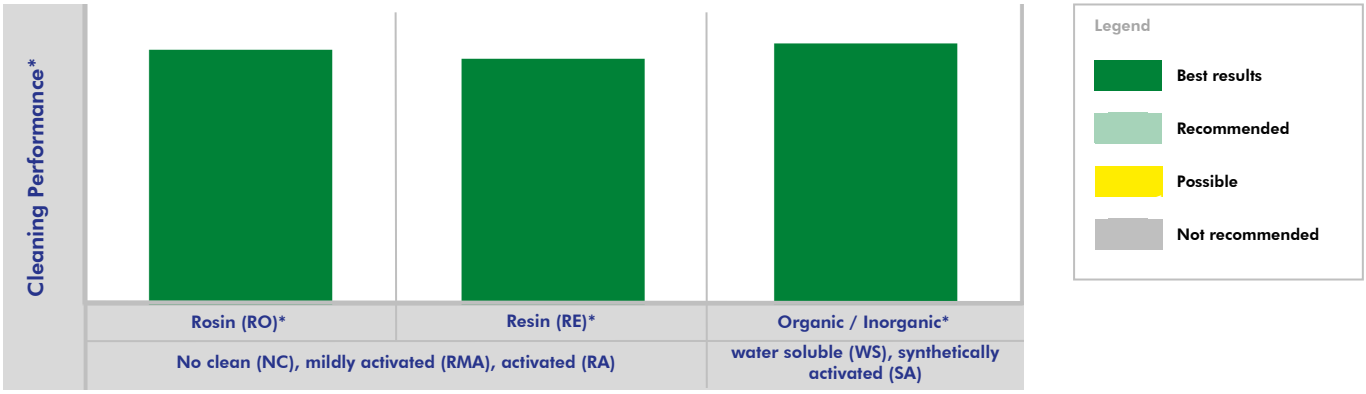
VIGON® PE 190A

Alkaline defluxing agent for Power Electronics and PCBAs

VIGON® PE 190A is a water-based, alkaline cleaning agent specifically developed for the use in spray-in-air equipment. Based on the MPC®-Technology, VIGON® PE 190A reliably removes flux residues from leadframes, discrete devices, power modules, power LEDs and PCBAs, specifically under low-standoff components. The cleaning agent exhibits excellent performance on strongly oxidized and stained copper surfaces, ensuring material compatibility in preparation for subsequent processes such as wire/adhesive bonding and moulding.

Areas of application – Defluxing of Power Electronics & PCBAs



* J-STD-004

Advantages compared to other cleaners

- Excellent defluxing performance for Power Electronics and PCBAs with low-standoff components
- Provides stain-free, activated copper surfaces for subsequent wire bonding, moulding or adhesive bonding, extremely well on strongly oxidized and stained parts
- Retains activated copper surfaces over an extended period of time without risk of reoxidation
- Excellent material compatibility, specifically with dies, leaving the passivation intact
- Formulated for effective rinsing, no foaming
- No flash point, thus applicable in all spray-in-air equipment without explosion proof

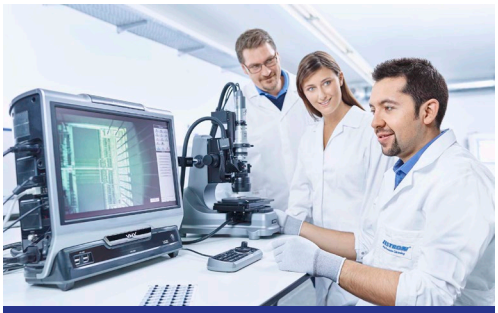
Process Steps

Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Spray-in-air (inline & batch)	Power Electronics & PCBAs	VIGON® PE 190A	DI-water[1]	Hot air or circulating air
Dip tank (US / SUI)	Power Electronics & PCBAs	VIGON® PE 190A	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.

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: +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	29.6
Boiling point	°C/°F	> 98°C / > 208°F
Flash point	°C/°F	None until boiling
pH value	10g/l H_2O	10.2
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 %

* Please note that the following information represents VIGON® PE 190A at 15 % concentration.

[1] The concentrate of VIGON® PE 190A has to be diluted in DI-water.

Product Features & Cleaning Standards

RoHS & WEEE	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	Product is free of any critical substances according to SIN & SVHC lists

Electronic assemblies cleaned with VIGON® PE 190A in a ZESTRON specified process meet the following industry standards:

- 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

A cleaning process using VIGON® PE 190A can help to reduce particle contamination.

Environmental, health & safety regulations

- VIGON® PE 190A is water-based and biodegradable.
- VIGON® PE 190A 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 190A 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 190A, 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 190A a variety of process support products are available:

Concentration measurement:
- ZESTRON® EYE for automated real-time concentration monitoring providing 100% traceability.
- ZESTRON® Bath Analyzer 10, a manual test method for fast and reliable checks on cleaner concentration.

Cleaning agent regeneration:
- Adsorber HM1 allows for the adsorption of heavy metals in your cleaning process when VIGON® PE 190A is applied.