

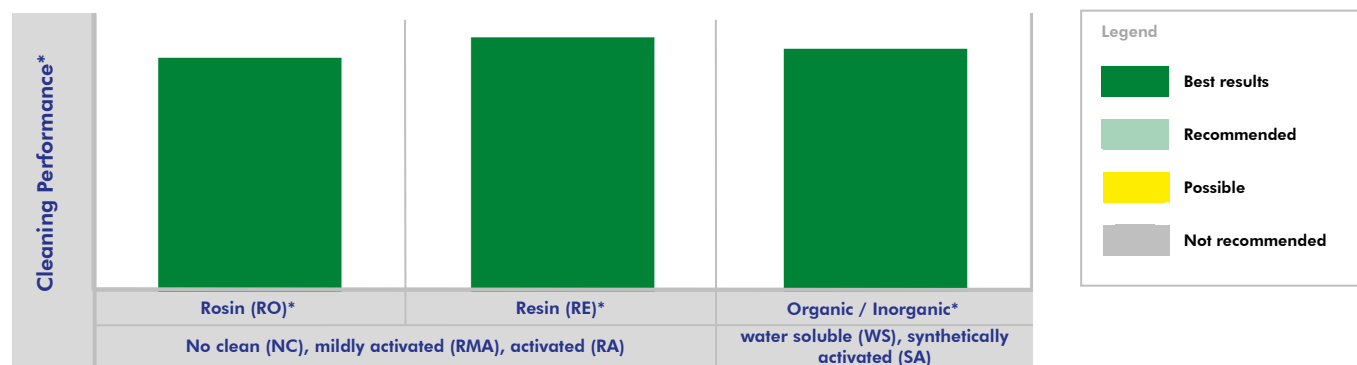
VIGON® PE 216A

Alkaline cleaner for the removal of fluxes, lubricants and processing fluids in power electronics applications



VIGON® PE 216A is a water-based, alkaline cleaning agent specifically developed for the use in spray-in-air equipment. On one side, the cleaning agent provides excellent performance in flux removal from power electronics, especially from power modules such as DCBs, after die attach and heatsink soldering. On the other side, it reliably removes lubricants and processing fluids from leadframes before friction welding or soldering. VIGON® PE 216A provides very good material compatibility and copper deoxidation at the same time. Thus the cleaner ensures optimal preparation of surfaces for subsequent processes such as wire/adhesive bonding and moulding.

Areas of application – Defluxing of Power Electronics



* J-STD-004

Advantages compared to other cleaners

- Excellent cleaning performance for Power Electronics / Power Modules
- Reliable removal of lubricants and processing fluids, therefore highly recommended for cleaning of leadframes before friction welding or soldering
- Provides stain-free, activated copper surfaces for subsequent wire bonding, moulding or adhesive bonding.
- Formulated for effective rinsing, prevents reoxidation of Cu surfaces
- Retains activated copper surfaces over an extended period of time
- Good material compatibility, specifically with dies, leaving the passivation intact
- No flash point and no foaming, thus applicable in all spray-in-air equipment without explosion proof.
- Also possible to be used in ultrasonic dip tanks machines.

Process Steps

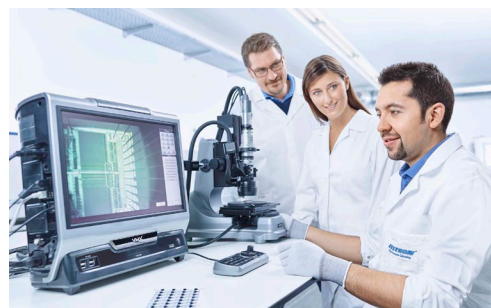
Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Spray-in-air (inline & batch)	Power Electronics	VIGON® PE 216A	DI-water ¹	Hot air or circulating air
Dip tank (US)	Power Electronics	VIGON® PE 216A	DI-water ¹	Hot air or circulating air (also with vacuum drying)

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	29,8
Boiling point	°C/°F	> 98°C / > 208°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	40 - 70°C / 104 - 158°F
Solubility in water		Soluble
Application concentration ¹ (leadframe)	Concentrate	2,5 - 15 %
Application concentration ¹ (power module)	Concentrate	10 - 25 %

* Please note that the following information represents VIGON® PE 216A at 15 % concentration.

¹ The concentrate of VIGON® PE 216A 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 VIGON® PE 216A 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 VIGON® PE 216A can help to reduce particle contamination.</p>
	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 216A is water-based and biodegradable.
- VIGON® PE 216A 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 216A 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 216A, 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 216A 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.