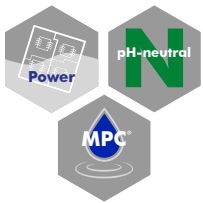


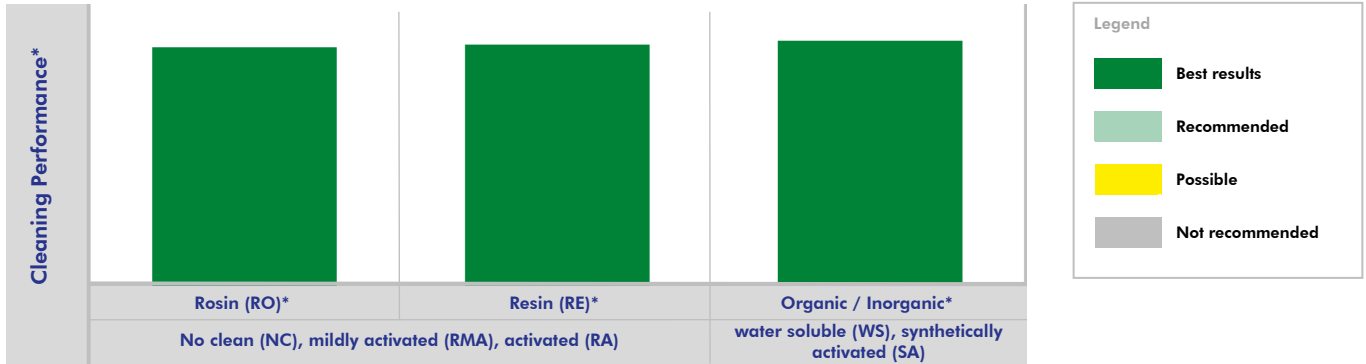
VIGON® PE 305N

pH-neutral defluxing agent for Power Electronics



VIGON® PE 305N is a water-based, pH-neutral MPC® cleaning agent specifically developed for Power Electronics. The cleaning agent reliably removes flux residues, especially from synthetic solder pastes, and provides excellent Cu deoxidation. Therefore, VIGON® PE 305N is suitable for the cleaning of power modules after soldering, e.g. after die attach or heat sink soldering. The cleaner is also recommended for the use after sintering to remove organic layers and Cu oxidation from the surfaces to prepare for subsequent processes such as wire bonding or molding. The cleaning agent provides very good material compatibility with sensitive metals and dies and is suitable for spray-in-air batch and inline equipment.

Areas of application – Defluxing of Power Electronics



* J-STD-004

Advantages compared to other cleaners

- Excellent defluxing performance for Power Electronics, especially in the case of synthetic solder pastes.
- Suitable for cleaning after sintering, removing organic layers and oxidation from the sintering process.
- Provides stain-free, activated copper surfaces for subsequent wire bonding, molding or adhesive bonding.
- Thus highly recommended for complex power module production with several soldering and/or sintering processes.
- pH-neutral, therefore excellent 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.

Process Steps

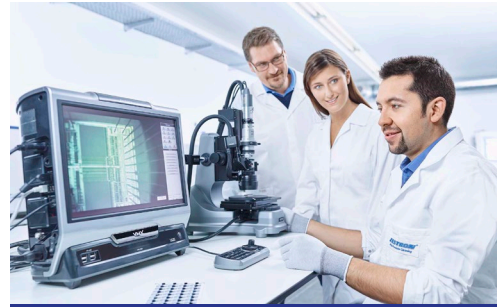
Cleaning Process	Parts	1. Cleaning	2. Rinsing	3. Drying
Spray-in-air (inline & batch)	Power Electronics	VIGON® PE 305N	DI-water ¹	Hot air or circulating air

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

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Machine Test Center



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	1.00
Surface tension	(mN/m) at 25°C/77°F	35.4
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 %

* Please note that the following information represents VIGON® PE 305N at 20 % concentration.

¹ The concentrate of VIGON® PE 305N has to be diluted in DI-water.

Product Features & Cleaning Standards

 <p>100% compliance with EU guidelines (RoHS 1, 2 & 3, WEEE)</p>	<p>Electronic assemblies cleaned with VIGON® PE 305N 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 305N can help to reduce particle contamination.</p>
 <p>Extensively tested and suitable for cleaning lead-free solder pastes</p>	
 <p>MPC® Technology ensures an extremely long bath life when used in a closed loop system</p>	
 <p>Product is free of any critical substances according to SIN & SVHC lists</p>	

Environmental, health & safety regulations

- VIGON® PE 305N is water-based and biodegradable.
- VIGON® PE 305N 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 305N 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 305N, 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 305N 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.