

# ZESTRON® VD

## Water-free precision cleaning medium for cleaning of electronic assemblies



ZESTRON® VD is a solvent-based cleaning agent designed to remove flux residues from electronic assemblies, ceramic hybrids, power modules and leadframes in closed-loop, one chamber, vapor degreasing type systems.

Areas of application: PCB's, ceramic hybrids, power modules & leadframes		Further information on this product:
Low solid flux residues*	+	<b>Technical Information sheet 2:</b> Overview of all fluxes and solder pastes tested
Rosin based flux residues*	+	
Water soluble flux residues*	o	<b>Technical Information sheet 3:</b> Overview regarding material compatibility
Solder pastes (unsoldered)	++	
SMT-adhesive or conductive adhesive	+	<b>Application Recommendation:</b> Specific process parameters for your cleaning trial
Thick film pastes	+	

++ highly recommended, best results      + recommended      o possible

\* Apply for all standard, lead-free and eutectic solder pastes

### Free-of-Charge Cleaning Trials at ZESTRON's Technical Centers



Free-of-charge cleaning trials can be performed at one of ZESTRON's Global Technical Centers. ZESTRON's European, North American and Asian Technical Centers feature spray-in-air, ultrasonic or spray-under-immersion processes. This provides an extensive overview on all available processes by leading international equipment manufacturers.



Upon completion of the cleaning trials, extensive analytical tests such as SIR and ionic residue measurements can be performed.

Please consult with ZESTRON's Application Technology Centers regarding future cleaning trials.

### Advantages compared to other cleaners:

- Due to its polar and nonpolar components ZESTRON® VD has a wide field of application.
- Completely distillable and therefore suitable for one chamber vapor degreaser processes with vacuum distillation and vapor rinsing step.
- ZESTRON® VD is surfactant-free and hence dries residue-free.
- ZESTRON® VD is particularly suitable for water-free applications, especially when rinsing with water is not required/admitted.
- ZESTRON® VD works exceptionally well for the cleaning of capillary spaces, i. e. underneath BGA's and flipchips.
- ZESTRON® VD can also be used for stencil cleaning and in SMT printers.

Please refer to the material compatibility list (Technical Information 3) before cleaning plastics.

ZESTRON® VD is approved by leading international manufacturers of cleaning machines. Written approvals can be obtained from ZESTRON.

Process	Cleaning	Rinsing	Drying
Closed loop processes with vapor rinsing	ZESTRON® VD	ZESTRON® VD	Vacuum
Spray-in-air (explosion-proofed)	ZESTRON® VD	ZESTRON® VD	Ambient or compressed air

Technical Data		
Density	(g/ccm) at 20°C/68°C	0.88
Surface tension	(mN/m) at 25°C/77°F	26.3
Boiling range	°C/°F	170 – 175 / 338 – 347
Flash point	°C/°F	62 / 144
pH-Value	10g/l H <sub>2</sub> O	neutral
Vapor pressure	(mbar) at 20°C/68°F	1.0
Cleaning temperature	°C/°F	40 – 45 / 104 - 113
Solubility in water		not soluble
Application concentration	Ready to use	Pure
HMIS Rating	Health-Flammability-Reactivity	1 – 2 – 0

**LEAD-FREE COMPLIANT**



ZESTRON® VD meets the new RoHS & WEEE guidelines as well as current worker safety standards and the actual applicable environmental requirements. ZESTRON voluntarily avoids the use of critical substances at product development.



Extensive tests confirmed the qualification of ZESTRON® VD for the cleaning of lead-free solder pastes. For detailed results please request our Technical Information 2.

**Environmental, health and safety regulations:**

ZESTRON® VD is solvent-based and biodegradable. The cleaner does not contain any halogenated compounds and is environmentally friendly. No special precaution for handling of the ZESTRON® VD is required.

**Availability/Storage:**

ZESTRON® VD is available in 1L bottles, 5L or 25L canisters and 200L drums. This product is a non-hazardous material.

Store ZESTRON® VD 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.

**Cleaning standards:**

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

- IPC 610 Visual cleanliness
- J-STD 001 D Ionic cleanliness
- IPC-TM 650 and DIN 32513 (surface resistance)
- J-STD 003 solderability

**Alternative product recommendation:**

For the removal of flux residues with a MPC® based medium in dip tanks we recommend VIGON® US, for cleaning in spray applications we recommend VIGON® A 200+ and VIGON® A 201.