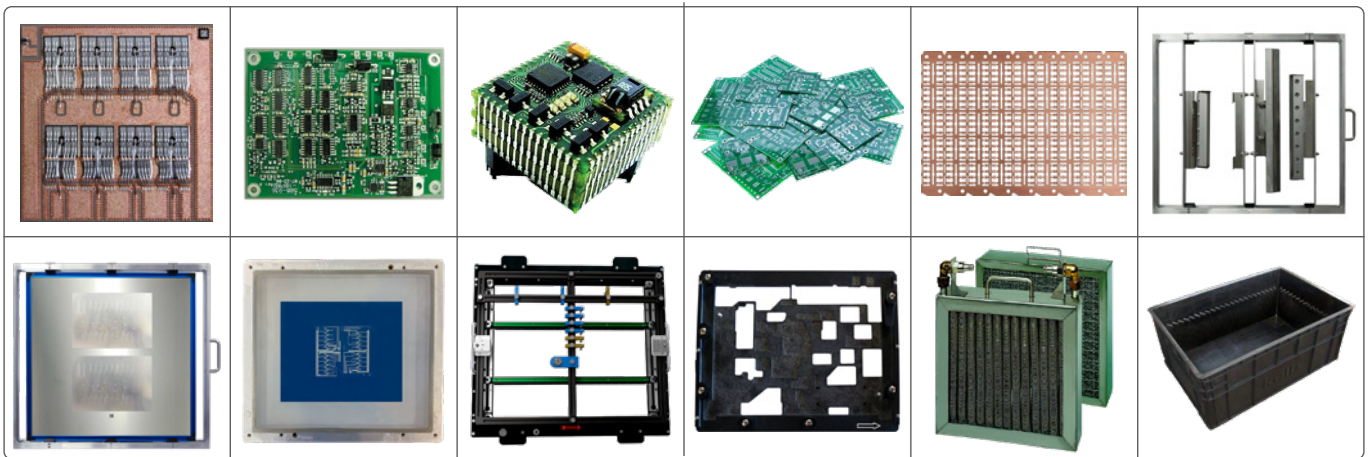
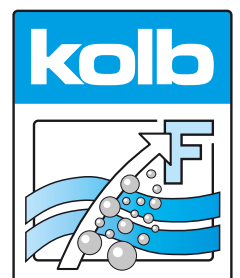


# Product Catalog

# 2024

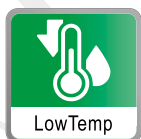
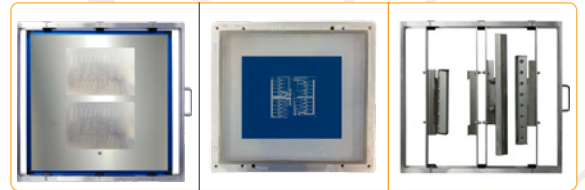
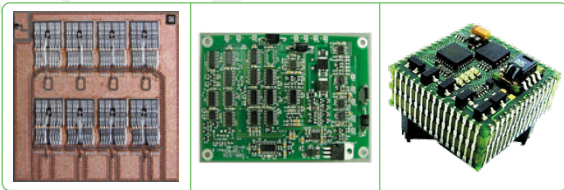


# Cleaning Chemistry



# The MultiEx® 3D Series

The **kolb** MultiEx® 3D cleaner series offers aqueous alkaline deep detergents that are ideally suited for the thorough and gentle cleaning of **DCBs / power electronics, PCBAs, HDI PCB's, Flip Chips, ceramic substrates, aluminum, non-ferrous metals** and, depending on the cleaning task, also for the qualified cleaning of **screens** and **stencils, squeegees** and **scrapers**. MultiEx® 3D detergents remove thoroughly **flux, copper oxide / CuO, aluminum oxides / Al<sub>2</sub>O<sub>3</sub>, SMD adhesive** and (optional), **solder paste**.



## 3D means three dimensional operation:

1. Flux removal
2. Deoxidation of the metal surfaces, especially with copper and aluminum
3. Passivation of metal surfaces to avoid renewed rapid oxidation

MultiEx® 3D detergents have a special unique „WashCoat“ formula. It ensures that cleaned and deoxidized metal surfaces remain long oxide-free without any detectable layer on the surface of the component.

MultiEx® 3D series is characterized by a nuanced raw material shift between the individual detergent models, offering a broad spectrum of efficacy that creates the prerequisite to clean all commercially available **fluxes** and **pastes** thoroughly and with best material protection.

MultiEx® 3D detergents are delivered as ready-to-use mixtures for direct use in **kolb** systems with PowerSpray® technology and all common spray-in-air cleaning systems. Depending on the product and cleaning task also suitable for **kolb** AirFlow® systems as well as for all common spray-in-immersion and ultrasonic cleaning systems.

## Relevant kolb cleaning systems:

- **AQUBE®** X series for PCBAs and DCBs
- **AQUBE®** L series for PCBAs and (optional) DCBs
- **PSE** L series for PCBAs
- **AQUBE®** MV series for screens, stencils and tools
- **PSE** MV series for screens, stencils and tools
- **PSE** 300 series for screens, stencils and (optional) PCBAs



## MultiEx® 3D-A3

Standard broadband DCB (also PCBA) detergent

PRODUCT DATA	
pH-value at 20 °C	10.4
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## MultiEx® 3D-B1

Special cleaner for DCBs and power electronics

PRODUCT DATA	
pH-value at 20 °C	11.1
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## MultiEx® 3D-H2

Ideally applicable for assembled PCBAs (also DCBs)

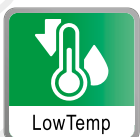
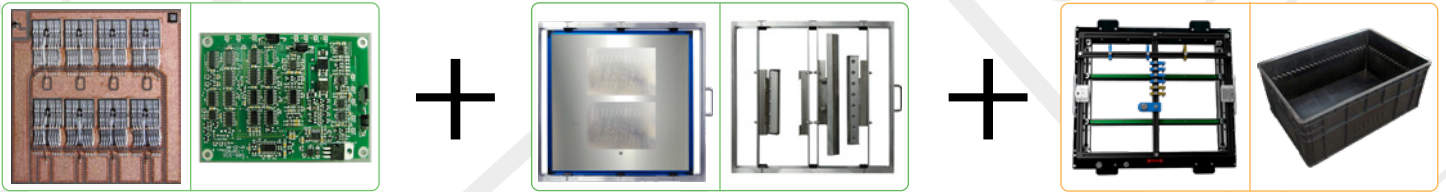
PRODUCT DATA	
pH-value at 20 °C	10.4
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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# The MultiEx® VR Series

The **kolb** MultiEx® VR series offers aqueous alkaline detergents with an extremely broad spectrum of efficacy. MultiEx® VR detergents are very durable and most suitable for the quick and thorough cleaning with best material protection of **PCBAs**, **ceramic substrates**, **misprints** (single side mounted or bare boards), but also **stencils**, **screens**, **squeegees** and **scrapers** and conditionally **solder carriers**, **solder pallets**, **ESD boxes**, **PCB magazines**. Depending on cleaning task MultiEx® VR detergents are also suitable for **condensations traps** and **coolers**.



## Perfectly suited for low standoffs

MultiEx® VR detergents are characterized by a nuanced raw material shift between the individual series models, offering a broad spectrum of efficacy. The detergents clean particularly all commercially available **fluxes** and **pastes** and also **oils**, **grease** and **dust**. All cleaners of the series provide a high surface cleanliness and are, due to their high fluidity, perfectly suitable for the thorough and best material protecting cleaning of low standoffs.

Due to the TS+ pH buffering (see also last page), MultiEx® VR detergents have a significantly longer effectiveness / service life, so they have to be changed less and thus save considerable operating costs.

Depending on the product and cleaning task the detergents are also suitable for **kolb** AirFlow® systems as well as all common spray-in-immersion and ultra-sonic cleaning systems.

MultiEx® VR series detergents are delivered as ready-to-use mixture (MultiEx® VR-SP also as concentrate) for direct use in **kolb** systems with PowerSpray® technology and all common spray-in-air cleaning systems.

## Relevant kolb cleaning systems:

- **AQUBE® X** series for PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AF** series for carriers, machine parts, boxes



## MultiEx® VR-18

Broadband cleaner for hard to clean fluxes on PCBAs

### PRODUCT DATA

pH-value at 20 °C	11.2
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## MultiEx® VR-HPA

Broadband cleaner for PCBAs with sensitive components

### PRODUCT DATA

pH-value at 20 °C	11.0
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## MultiEx® VR-SP

Broadband detergent for PCBAs and many more

### PRODUCT DATA

pH-value at 20 °C	11,2
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	ReadyMix, Concentr.
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



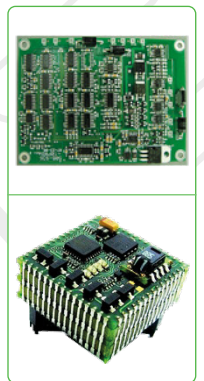
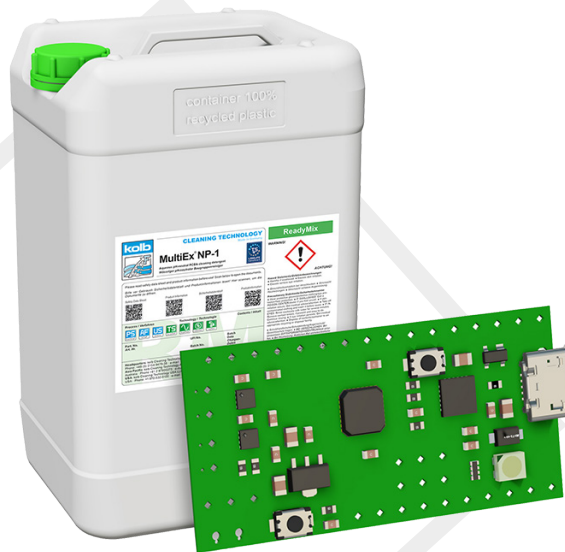
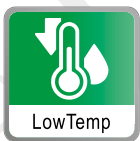
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# MultiEx® NP-1

Multifunctional detergent especially for PCBAs and power electronics

MultiEx® N-P1 is an aqueous, pH-neutral, single-phase **PCBA** cleaner - suitable for **high-current applications**. It dissolves **flux** and **solder paste** quickly, thoroughly and gently with high cleaning power. MultiEx® N-P1 provides best material compatibility for sensitive assemblies, power electronics as well as for the materials and labels used.

MultiEx® N-P1 has an extremely broad spectrum of activity, regarding different **fluxes** and solder pastes as well as application temperatures. The detergent has perfect flow properties for cleaning low standoffs. It cleans conditionally also **stencils, screens, solder carriers, boxes** and **magazines**.



PRODUCT DATA	
ph-value at 20 °C	7,5
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Application	pure
Water solubility	fully soluble
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## Relevant kolb cleaning systems:

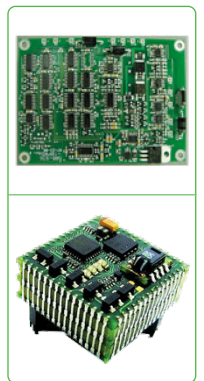
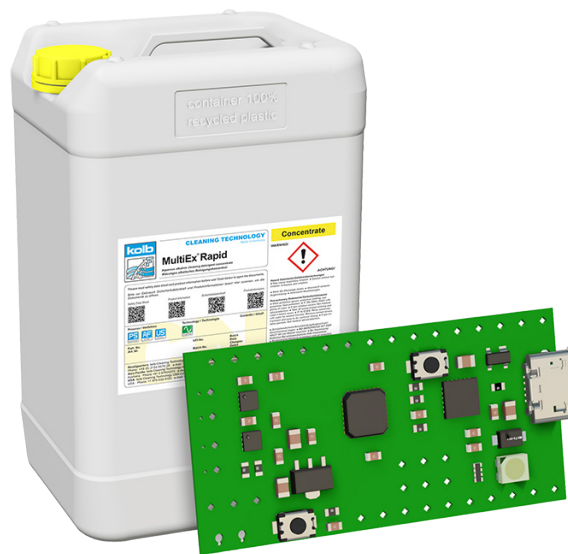
- **AQUBE® X** series for PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs

# MultiEx® Rapid

Intensive remover for all kinds of fluxes

MultiEx® Rapid is an aqueous alkaline high-performance PCBA cleaning concentrate for electronics manufacturing. It specifically removes all kinds of **fluxes**. The detergent is ideally suited for the thorough and fast cleaning of **PCBAs** with difficult to clean flux residues (for example after several soldering processes).

MultiEx® Rapid is applicable for **kolb** PowerSpray® systems as well as all common spray-in-air, spray-in-immersion, air-in immersion (e.g. **kolb** AirFlow® systems) and ultrasonic cleaning systems. It is perfectly suited for high temperature cleaning and cleans conditionally also **stencils, screens, solder carriers, boxes** and **magazines**.



PRODUCT DATA	
ph-value at 20 °C	11,0
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Standard mixing ratio	1:3
Water solubility	fully soluble
Application temperature	30 - 60 °C



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## Relevant kolb cleaning systems:

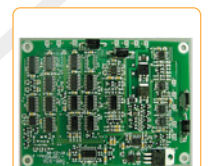
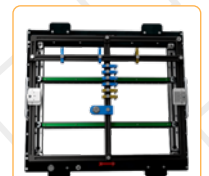
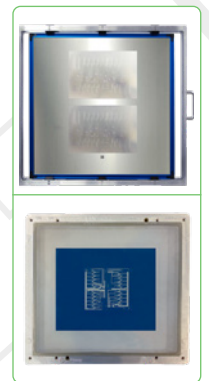
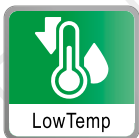
- **AQUBE® X** series for PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AF** series for carriers, boxes

# MultiEx® N7-TS

Regenerative stencil cleaning and rinsing detergent

MultiEx® N7-TS (as ReadyMix or concentrate) is a broadband neutral cleaning agent and provides excellent results for cleaning **screens** and **stencils** as well as for **misprints** and **stencil undersides** cleaning in screen printers. The rinse suitable detergent can be used in water-free systems / processes.

MultiEx® N7-TS cleans particularly **pastes, dust, fats, oils** and (conditionally) **adhesive** and **flux**. Depending on cleaning task also suitable for **PCBAs, solder carriers, solder pallets, ESD boxes, PCB magazines**. The cleaner is formulated as a single-phase agent and thus the cleaner remains stable in itself without permanent agitation.



PRODUCT DATA	
pH-value at 20 °C	6.7
Conductance at 20 °C	< 50 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	ReadyMix, Concentr.
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



Get more info



ReadyMix

Concentrate

## Relevant kolb cleaning systems:

- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs

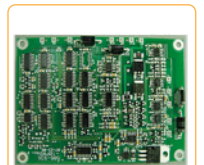
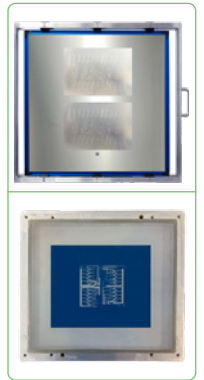
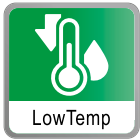


# MultiEx® N8

## Regenerative multifunctional cleaning detergent

MultiEx® N8 is an aqueous, pH-neutral regenerative cleaning concentrate. It cleans particularly **pastes** and **adhesives** as well as all kinds of **fluxes** and is most suitable for the quick and thorough cleaning of **stencils** and **screens** with best material protection.

Depending on cleaning task also suitable for assembled **PCBAs**, **solder carriers**, **solder pallets**, **ESD boxes**, **PCB magazines**. The cleaning concentrate to blend with water is suitable for use in **kolb** systems with PowerSpray® technology and in all common spray-in-air cleaning systems.



PRODUCT DATA	
pH-value at 20 °C	6.7
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Standard mixing ratio	1:3 with water
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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### Relevant kolb cleaning systems:

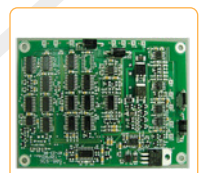
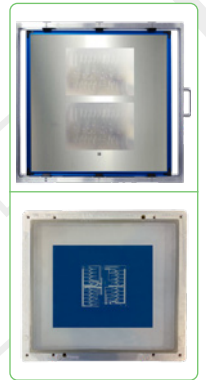
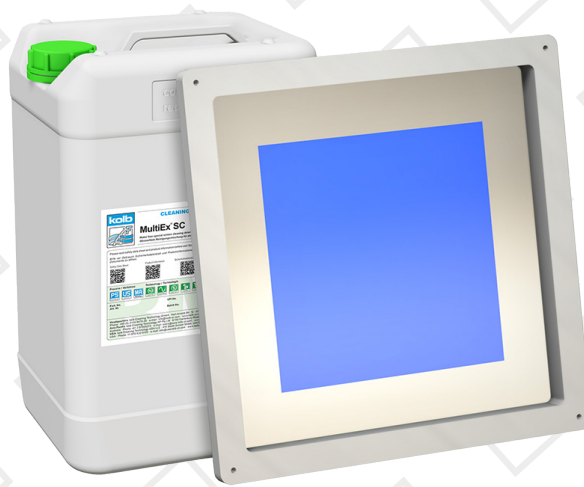
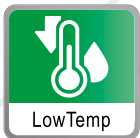
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs

# MultiEx® SC

## Anhydrous special screen cleaning detergent

MultiEx® SC is a pH neutral screen cleaner developed especially for the cleaning of **resistant conductive pastes from photo technical screens** and **stencils, misprints** (bare boards), **aluminum**. Conditionally also suitable for **PCBAs, carriers, ESD boxes, PCB magazines**. The single-phase detergent needs no phase separation during the cleaning process. It remains stable in itself and does not have to be agitated permanently.

MultiEx® SC can also be used as a detergent in a completely water-free process, especially in the case of water-sensitive products. (Water-free rinsing can be carried out e.g. with MultiEx® GC)



PRODUCT DATA	
pH-value at 20 °C	neutral (water free)
Conductance at 20 °C	< 50 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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### Relevant kolb cleaning systems:

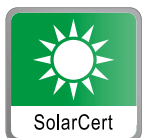
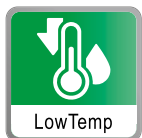
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs

# MultiEx® GC

Special screen cleaner for SMD adhesives

MultiEx® GC is a pH-neutral special cleaning and / or rinsing detergent to remove **adhesives, aluminium and silver pastes** e.g. from **screens, stencils, misprints** (bare boards), **aluminium** and **stainless steel**. Conditionally also suitable for **solder carriers, ESD boxes** and **magazines, PCBAs** and **misprints** (single side mounted) . The cleaner is formulated as a single-phase agent and so does not have to be agitated permanently.

MultiEx® GC can also be used as a rinsing fluid, especially in the case of water-sensitive products in a completely water-free process. The detergent is certified for solar cell production.



PRODUCT DATA	
pH-value at 20 °C	neutral (water free)
Conductance at 20 °C	< 50 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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## Relevant kolb cleaning systems:

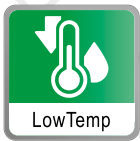
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs

# MultiEx® B11

## Alkaline multifunctional aqueous tools cleaning detergent

MultiEx® B11 is an aqueous alkaline detergent with an extremely broad spectrum of efficacy. The robust economy cleaner is mainly suitable for tools cleaning. MultiEx® B11 cleans particularly **SMD-pastes** and (conditionally) also **SMD adhesives** and **flux**.

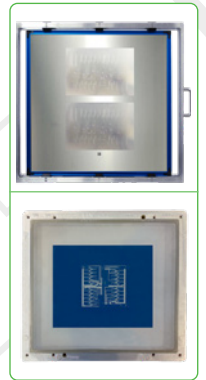
MultiEx® B11 is most suitable for the quick and thorough cleaning with best material protection of **stencils, screens, solder frames, solder pallets, ESD boxes, PCB magazines**. Depending on cleaning task also suitable for **PCBAs, condensation traps, coolers, steel sheets**.



PRODUCT DATA	
ph-value at 20 °C	11.1
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Standard mixing ratio	1:3 with water
Water solubility	easily soluble
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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### Relevant kolb cleaning systems:

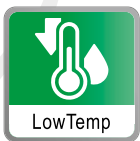
- **AQUBE® M** series for screens, stencils and tools
- **PSE M** series for screens, stencils and tools
- **PSE 300** series for screens, stencils and (optional) PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs
- **AQUBE® X** series for PCBAs
- **AF** series for carriers, machine parts, condensate filters

# MultiEx® A12

## Alkaline multifunctional water based broadband detergent

MultiEx® A12 is an aqueous alkaline detergent particularly for **fluxes** and **solder pastes**. It is most suitable for the quick and thorough cleaning of **solder frames, solder pallets, ESD boxes, PCB magazines** and also **PCBAs**. Depending on cleaning task also suitable for **screens, stencils, condensation traps, steel sheets**.

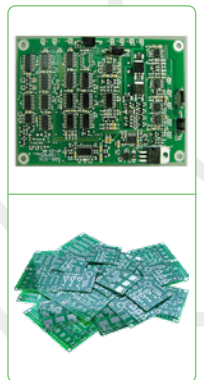
MultiEx® A12 is a ReadyMix for direct use in kolb systems with PowerSpray® or AirFlow® technology and any common spray-in-immersion or spray-in-air cleaning system. Depending on product and cleaning task also suitable for ultrasonic cleaning systems.



PRODUCT DATA	
pH-value at 20 °C	11-2
Conductance at 20 °C	< 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	pure (ReadyMix)
Application temperature	20 - 45 °C
Regenerable	yes (TS Technology)



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### Relevant kolb cleaning systems:

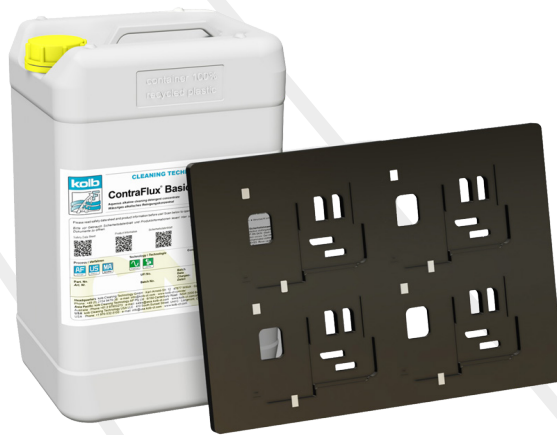
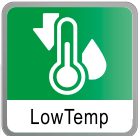
- **AQUBE® M** series for tools, screens, stencils
- **PSE M** series for tools, screens, stencils
- **PSE 300** series for screens, stencils and (optional) PCBAs
- **AQUBE® L** series for PCBAs
- **PSE L** series for PCBAs
- **AQUBE® X** series for PCBAs
- **AF** series for carriers, machine parts, condensate filters

# ContraFlux® Basic

The most versatile detergent for AirFlow® systems

ContraFlux® Basic is a proven, versatile, aqueous, alkaline broadband detergent concentrate that has been specially developed for the maintenance cleaning of **tools** and **containers** in electronics production. In particular, it cleans all types of flux residues and is ideal for quick and thorough cleaning of **soldering frames**, **soldering masks**, **ESD boxes**, PCB magazines and, to a certain extent, **condensate traps** and **radiator cladding**.

The cleaner is designed for kolb AirFlow® systems as well as for all common spray-in-immersion cleaning systems. Depending on the product and cleaning task, it is also suitable for ultrasonic cleaning devices.



PRODUCT DATA	
pH-value at 20 °C	11,4
Conductance at 20 °C	> 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Standard mixing ratio	1:3 with water
Water solubility	fully soluble
Application temperature	20 - 45 °C



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## Relevant kolb cleaning systems:

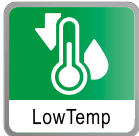
- AF series for carriers, machine parts, pallets, ESD boxes, condensate traps

# ContraFlux® BC

Cleaning concentrate especially for maintenance cleaning

ContraFlux® BC is an aqueous alkaline broadband detergent concentrate specifically designed for maintenance cleaning of **tools** and **containers** used in electronics manufacturing. It cleans particularly all kinds of **flux** residues.

ContraFlux® BC is ideally suited for the quick and thorough cleaning with best material protection of **ESD boxes**, **PCB magazines**, **solder frames** and **masks**. Depending on the cleaning task also suitable for **misprints**, **stencils** and **filters**. Suitable for AirFlow® and PowerSpray® systems as well as for all common spray-in-immersion and spray-in-air cleaning systems. Conditionally also suitable for ultrasonic cleaning systems and manual cleaning.



PRODUCT DATA	
pH-value at 20 °C	13,4
Conductance at 20 °C	> 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Standard mixing ratio	1:3 with water
Water solubility	fully soluble
Application temperature	20 - 45 °C



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## Relevant kolb cleaning systems:

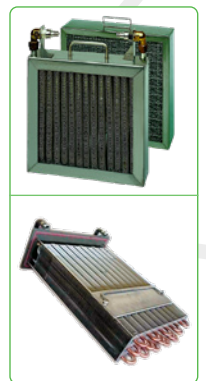
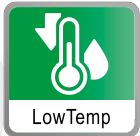
- **AF** series for carriers, machine parts, pallets, ESD boxes, condensate traps
- **AQUBE® M** series for tools, screens, stencils
- **PSE M** series for tools, screens, stencils

# ContraFlux® FM

Alkaline multifunctional aqueous tools cleaning detergent

ContraFlux® FM is an aqueous alkaline special cleaner for maintenance cleaning especially of **condensate management systems** specifically from condensate and rosin. It is ideally suited for the quick and thorough cleaning of **condensate traps, filter sheets, coolers, cyclones**.

Depending on the cleaning task also suitable for **solder frames, solder pallets, ESD boxes** and **PCB storage magazines**. ContraFlux® FM can absorb flux up to 20 percent of its volume. This means a very long service life and thus high cost efficiency. Ideally suited for the external cleaning of piping and cyclones.



PRODUCT DATA	
pH-value at 20 °C	12.4
Conductance at 20 °C	< 50 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	undiluted
Application temperature	20 - 45 °C



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## Relevant kolb cleaning systems:

- AF series for filters, c condensate traps, carriers, machine parts, pallets, ESD boxes

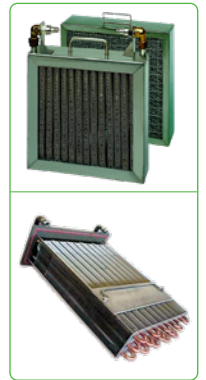
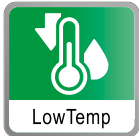


# StoveEx®

Extra strong aqueous detergent concentrate for maintenance cleaning

StoveEx® is an extra strong alkaline cleaning concentrate especially developed for the removal of stubborn and burnt-on dirt and epoxy resins. It cleans especially **condensate traps, filter plates, coolers** and **cyclones**. It is conditionally also suitable for **solder frames** and **pallets, ESD boxes** and **PCB storage magazines**.

StoveEx® is suitable for AirFlow® (air- / spray-in immersion) and ultrasonic systems. It is available exclusively for PP systems and not suitable for the cleaning of galvanized surfaces, aluminum and non-ferrous metals.



PRODUCT DATA	
pH-value at 20 °C	13.8
Conductance at 20 °C	> 100 µS/cm
Flash point	> 100 °C
VOC content	< 20 %
Standard mixing ratio	1:2
Water solubility	fully soluble
Application temperature	20 - 45 °C



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## Relevant kolb cleaning systems:

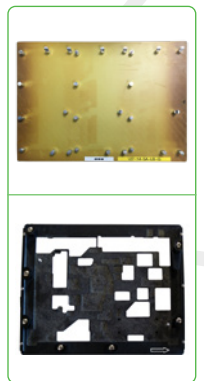
- AF series for filters, condensate traps, carriers, machine parts, pallets, ESD boxes

# RemoCoat® SG

Detergent for mechanical paint stripping

**kolb** RemoCoat® SG is a homogeneous, water free intensive coating remover especially for the conformal coating sector, applicable for **coating carriers, solder masks** and **metals**. The paint remover removes **parlylene coatings, epoxy resins, acrylic paints, synthetic resin paints, nitro paints, two-component paints, UV paints, powder coatings and polyurethanes**.

As suitable cleaning systems all **kolb** AQUBE® and PSE MH PowerSpray® pressure spray-in air systems can be considered. They are perfectly suited for varnish and coating cleaning with RemoCoat® SG.



PRODUCT DATA	
pH-value at 20 °C	not measurable (water free)
Flash point	> 100 °C
VOC content	> 50 %
Application	undiluted
Application temperature	20 - 55 °C



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## Relevant kolb cleaning systems:

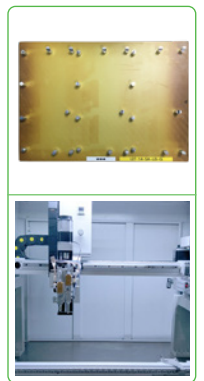
- AQUBE® MH series for carriers tools, machinery parts
- PSE MH series for carriers tools, machinery parts

# CarrierSeal®

Sealing liquid against stubbornly adhering coating residues

kolb CarrierSeal® is a liquid sealing for **coating carriers** / **goods carriers** or for **chamber parts** of coating machines. If coating carriers or chamber elements - with CarrierSeal® applied prior to the coating process - are as heavily contaminated by varnish residues that optimal function is no longer guaranteed, these residues can be removed at lightning speed by simply manually peeling or machine cleaning off of the sealing film.

For machine cleaning it is recommended to use a pressure spray system with vertically operating rotors, which normally cleans stencils or assemblies e.g. **kolb** AQUBE® or PSE MV or PSE 300 PowerSpray® systems.



PRODUCT DATA	
pH-value at 20 °C	7.2
Flash point	> 100 °C
VOC content	< 20 %
Water solubility	fully soluble
Application	undiluted
Application temperature	20 - 90 °C - peak up to 120 °C



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## Relevant kolb cleaning systems:

- **AQUBE® MV** series for screens, stencils
- **PSE MV8** for screens, stencils
- **PSE 300** series for screens, stencils

# Special Detergents



## OF1®

OF1® is an oven cleaning gel for manual cleaning of **SMD reflow ovens** (process chamber), **wave soldering systems**, **vapor phase soldering** and **selective soldering systems**. It cleans quickly, thoroughly, without rinsing and with the best possible product protection of **flux** and **solder paste**.



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## CF1®

CF1® is an aqueous alkaline cleaning ReadyMix for manual cleaning of **reflow ovens** and **soldering systems**. It cleans **fluxes** quickly also from **solder frames**, **carriers**, **GRP**, **plastics**, **stainless steel**, **glass** etc. thoroughly with best possible product protection.



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## G50®

G50® is an aqueous alkaline cleaning ReadyMix for manual intensive cleaning of **hardened and old residues**. G50® oven cleaner dissolves **fluxes** quickly, thoroughly and gently, e.g. also from **machine parts**, solder frames, **carriers**, **GRP**, **plastics**, **stainless steel**, **glass** etc.



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## FR60 / FR100

FR R60 and FR100 are spray detergents for quick manual cleaning of **PCBAs**. They are perfectly suited for the fast removal of **flux** residues due to their short application time. FR60 spray is ideal for normal PCBA contaminations. For stubborn contamination it is recommended to use FR100 spray.



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## WipeEx SA120

WipeEx SA120 is an aqueous pH-neutral cleaning ReadyMix for the underscreen machine cleaning with fleece in screen printers. It cleans **SMD-adhesive** and **SMD-paste** and is ready for use in cleaning tanks of common screen printers with **stencil underscreen** cleaning.



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## WetWipes

WetWipes SA120 are ready to use tissues, soaked with the special aqueous and pH-neutral detergent WipeEx SA120 for the manual cleaning of SMD-tools such as **scrapers**, **squeegees** etc. from **SMD-adhesive** and **SMD-paste**.



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# Special Detergents



## ESD UniClean

ESD UniClean is a neutral cleaner especially for **ESD-equipment** for all kinds of **working tables, shelves** and other equipment. ESD UniClean has antistatic properties and is dust repellent. The electrostatic charge will be suppressed e.g. on **computer screens**.



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## ESD FloorClean

ESD FloorClean is a combined cleaner and polisher for **ESD-floors** to be used for the daily care, applied in a wet-wiping process. A permanent polishing process will enhance the durability and appearance of the polish. Also the conductivity of the floor will be optimized.



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## DisplayClean

DisplayClean is especially suitable for the **displays** of **kolb** cleaning systems, common **computer displays** as well as for the cleaning of almost all **plastic surfaces**. DisplayClean acts antistatic to prevent from electrostatic charges and dust attraction on displays and surfaces.



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## SG Clean

SG Clean is a very efficient ready to use **stainless steel** and **glass** cleaner. SG Clean will be sprayed pure or blended 1:1 with water (depending on contamination) onto the surface to be cleaned and then be wiped off with a dry cloth.



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## MaintClean®

MaintClean® is a concentrate for the elimination of **limescale, fungi** and **bacteria** for use in almost all kinds of electronics cleaning systems. MaintClean® cleans also during the vapor phase and thus reaches areas that normally are difficult to access with liquids.



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## RM24

RM24 is a rinsing fluid especially developed for the **rinsing of sensitive surfaces** (e.g. copper and brass alloys) in a separate rinsing containment / drip tray. RM24 is an alternative to water and dries residue-free under air.



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# Detergent Additives



## AntiFoam EL50

AntiFoam® EL50 is an aqueous and silicone-free neutral deaerator and defoamer which is added directly to the cleaning bath with foam occurring due to the entry of dirt. The mixing ratio e.g. at 75 l bath volume is 50 - 200 ml EL50 equal to 0.07 to 0.3%.



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## AntiFoam F12

AntiFoam® F12 is an aqueous, pH-neutral silicone-free foam regulator for **kolb** cleaning detergents. The surface active single-compound antifoaming agent is added, depending on water hardness, in a ratio of approx. 0.07 to 3 % to the detergent / water mix and can be rinsed residue free.



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## DIS 10/4

DIS 10/4 is an aqueous, pH-neutral cleaning bath additive (dispersing additive) that boosts detergents for flux and resin removal in electronics cleaning systems. The mixing ratios go from 0.4 to 4 % depending on the detergent type and constitution.



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## PowerBooster® HPA

PowerBooster® HPA is an additive for a variety of **kolb** detergents with a strong cleaning power boost. PowerBooster® HPA can be used both to quickly and thoroughly clean contaminated, less sensitive parts and / or to be added as a refresher to degrading cleaners.



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## PowerBooster® MPA

PowerBooster® MPA is an additive for a variety of **kolb** detergents with an evenly balanced boost of cleaning power / refreshing to degrading cleaners and corrosion protection. It can be used both to quickly and thoroughly clean contaminated, less sensitive parts and / or to be added as a refresher to degrading cleaners.



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## PowerBooster® TPA

PowerBooster® TPA is an additive for a variety of **kolb** detergents with highest cleaning power boost and moderate corrosion protection. PowerBooster® TPA can be used both to quickly and thoroughly clean heavily contaminated, robust parts and / or to be added as a refresher to degrading cleaners.



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# Detergent Additives & Service Products



## pHReducer

pHReducer reduces the pH-value of a saturated detergent / water mixture to a level of approx. 6 - 8, thus enables an environment-friendly disposal and is especially suited for mixture neutralisation in **kolb** sewage water processing systems. It reaches its best efficiency at a mixing ratio of approx. 2 to 3 l to 100 l cleaning bath mixture.



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## 4-part pHReducer

4-part pHReducer reduces the pH-value of a saturated detergent / water mixture to a level of approx. 6 - 8, thus enables an environment-friendly disposal and is especially suited for mixture neutralisation in **kolb** sewage water processing systems. It reaches its best efficiency at a mixing ratio of approx. 0.5 to 0.8 l to 100 l cleaning bath mixture.



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## pH Sticks

pHSticks are measuring stripes allow a quick, approximate (tolerance: +- 0.5 - 1) control of the pH-value e.g. of a cleaning detergent or rinse water. For more detailed inspections, **kolb** has test kits with appropriate equipment on offer (*see below*).



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## SC300

SC300 is a complete test kit in a service case for fast bath monitoring / analysis of the current operating state of a TS powered cleaning medium. With the test kit, tank contents, with **kolb** TS cleaners, can be easily and quickly monitored and checked regularly.



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## SC400

SC400 is a complete analysis kit in a service case for fast state determination / process monitoring of **kolb** MultiEx® cleaners. The following measuring options are available with the SC400: 1. Refraction / brix, 2. pH value 3.  $\mu$ S conductance (maximum 1999  $\mu$ S), 4. Total hardness



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## SC600

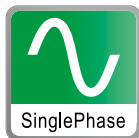
SC600 is a test set in a service case for the rapid detection of flux residues. With the **kolb** FluxControl fluid contained in the case, PCB assemblies or solder joints can be quickly and easily checked for critical interferences by flux.



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## Icons explanation



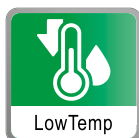
### SinglePhase

SinglePhase identifies homogeneous (single-phase) detergents that do not need to be mixed before use and later not permanently agitated. They work immediately with full cleaning effect, thus reducing process times and enabling cost-saving systems technology.



### LowConduct

LowConduct identifies detergents that contain very little conductive material, preventing cleaner-related conductivity (ionic contamination) from being transferred into rinsing processes. These cleaners significantly save water and energy.



### LowTemp

LowTemp identifies cleaners that reach their full effectiveness and viscosity to clean low standoffs already at 20-45 °C, thus making processes more stable, extending the cleaner's service life, saving energy and protecting machines and materials.



### WaterFree

WaterFree identifies anhydrous **kolb** detergents as well **kolb** cleaning systems which operate in a closed cycle without water (connection), only with a communicating cleaning / rinsing detergent.



### TernarySeq

TernarySequence® identifies the triple stage detergent technology developed by **kolb**. TS-powered detergents can be entirely regenerated using very simple filtration.



### TS+

TS+ labeled cleaners have a high-volume longlife pH buffering, about twice as high as comparable products on the market. TS+ detergents need to be changed less frequently and thus save considerable costs and also protect the environment.

## Service & Touch Points



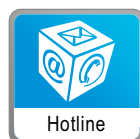
### Trainings

**kolb** offers trainings and workshops for the optimization of our customers processes and for their service- and maintenance teams - upon request with tailored training concepts and certificates for the participants. Trainings can likewise be executed in our demonstration center or directly at our customers plant.



### Service Request

You require our support? For agreements / questions via telephone you can reach us under our Hotline +49 (0) 2154 / 94 79 - 44, Monday-Friday 8 am to 3 pm If you need a technician, please send us the completed **kolb** service requisition. You will find it in the manual of your cleaning system or online [right here >>](#)



### Hotline

Information & Sales: Monday - Friday from 8 am to 5 pm, Phone +49 (0) 2154 / 9479 - 38.  
Service & Technical Support: Monday - Friday from 8 am to 3 pm, Phone: +49 (0) 2154 / 9479 - 44, in case of urgency also dial extension - 38, - 37 or - 22.

Our international branches as well as our global distribution partner network are always at your service: Please contact us any time to arrange an appointment.

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