



MultiEx® 3D-A8

Aqueous 3-dimensional ready to use detergent for the cleaning of DCBs.

Part No. 090666-RM25 // Content: 25 l

CLEANING TECHNOLOGY

Made in Germany



Application overview

Most suitable	Most suitable	Optional suitable	Optional suitable	Not suitable
Assembled PCBs Hybrids Misprints	Stencils Screens, PumpPrints Misprints	Solder frames Solder carriers Solder masks	ESD boxes Containers Magazines	Condensation traps Filters Steel sheets

Technical data	
Color	transparent
Odor	specific
pH-value at 20 °C	10,4
Initial boiling point and range	> 100 °C
Flash point	not determined
Density at 20 °C	1,02 g / cm ³
Water solubility	fully soluble
Viscosity (dyn.) at 20° C	28,0 mPa·s
Application	pure
Application temperature	20 - 45 °C
Storing frost-free	in original container
EWC key number	070699
CLP / GHS	GHS 07
MultiEx® 3D detergents work in three dimensions: 1. Flux removal, 2. Deoxidation of the metal surfaces, especially with copper and aluminum, 3. Passivation of the metal surfaces.	
Detergent ReadyMix for direct use in a cleaning system.	

Applications	
Copper oxide / CuO	++
Aluminum oxide / Al ₂ O ₃	++
SMD adhesive	o
Solder paste	++
Colophonium flux	++
Waterbased flux	++
Solder paste (soldered)	++
Spray-in-air systems	++
Spray-in-immersion systems	+
Air-in-immersion systems	+
Ultrasonic systems	+
Manual application	o
++ = ideal for application, + = recommended, o = optionally applicable, -- = not recommended	
Note: The spreadsheet only shows a general overview of the product specifications.	
Cleaning tests are reasonable to determine the optimum cleaner configuration. Such tests may be carried out directly at the kolb demonstration center in Willich / Germany or Shanghai / China or can be initiated by contacting your local kolb partner..	



MultiEx® 3D-B1

Aqueous 3-dimensional special detergent fcombining
 1. removal of colophonium, 2. deoxidizing 3. passivating

Part No. 090669-RM25 // Content: 25 l

CLEANING TECHNOLOGY

Made in Germany



Application overview

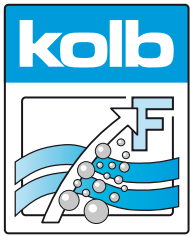
Most suitable	Most suitable	Optional suitable	Optional suitable	Not suitable
Assembled PCBs Hybrids Misprints	Stencils Screens, PumpPrints Misprints	Solder frames Solder carriers Solder masks	ESD boxes Containers Magazines	Condensation traps Filters Steel sheets

Technical data	
Color	transparent
Odor	amine
pH-value at 20 °C	11,1
Initial boiling point and range	not determined
Change in physical state	< 0 °C
Flash point	not determined
Density at 20 °C	0,98 g / cm ³
Water solubility	fully soluble
Viscosity (dyn.) at 20 °C	30,0 mPa·s
Application	pure
Application temperature	20 - 45 °C
Solvent content	> 50 %
EWC key number	070604
CP / GHS	GHS 07
<p>MultiEx® 3D detergents work in three dimensions: 1. Flux removal, 2. Deoxidation of the metal surfaces, especially with copper and aluminum, 3. Passivation of the metal surfaces. MultiEx® 3D-B1 is a special DCB cleaner for specific applications.</p> <p>Detergent ReadyMix for direct use in a cleaning system.</p>	

Applications	
Copper oxide / CuO	++
Aluminum oxide / Al ₂ O ₃	++
SMD adhesive	o
Solder paste	++
Colophonium flux	++
Waterbased flux	++
Solder paste (soldered)	++
Spray-in-air systems	++
Spray-in-immersion systems	+
Air-in-immersion systems	+
Ultrasonic systems	+
Manual application	o
<p>++ = ideal for application, + = recommended, o = optionally applicable, - = not recommended</p> <p>Note: The spreadsheet only shows a general overview of the product specifications.</p> <p>Cleaning tests are reasonable to determine the optimum cleaner configuration. Such tests may be carried out directly at the kolb demonstration center in Willich / Germany or Shanghai / China or can be initiated by contacting your local kolb partner..</p>	

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MultiEx® 3DH2

CLEANING TECHNOLOGY

Made in Germany

Aqueous 3-dimensional special detergent combining
1. removal of colophonium, 2. deoxidizing 3. passivating

Part No. 090663-RM25-2 // Content: 25 l



Application overview

Most suitable	Most suitable	Optional suitable	Optional suitable	Not suitable
Assembled PCBs Hybrids Misprints	Stencils Screens, PumpPrints Misprints	Solder frames Solder carriers Solder masks	ESD boxes Containers Magazines	Condensation traps Filters Steel sheets

Technical data	
Color	transparent
Odor	amine
pH-value at 20 °C	10,8
Initial boiling point and range	not determined
Flash point	not determined
Density at 20 °C	0,965 g / cm ³
Water solubility	fully soluble
Viscosity (dyn.) at 20 °C	40,0 mPa·s
Application	pure
Application temperature	20 - 45 °C
Storing frost-free	in original container
EWC key number	070104
CLP / GHS	GHS 07
<p>MultiEx® 3D detergents work in three dimensions: 1. Flux removal, 2. Deoxidation of the metal surfaces, especially with copper and aluminum, 3. Passivation of the metal surfaces. MultiEx® 3D-H2 is a standard broadband cleaner for DCBs and PCBs.</p> <p>Detergent ReadyMix for direct use in a cleaning system. If necessary kolb AntiFoam F12 (Part No. 090683-1) is recommended as defoamer additive.</p>	

Applications	
Copper oxide / CuO	++
Aluminum oxide / Al ₂ O ₃	++
SMD adhesive	o
Solder paste	++
Colophonium flux	++
Waterbased flux	++
Solder paste (soldered)	++
Spray-in-air systems	++
Spray-in-immersion systems	+
Air-in-immersion systems	+
Ultrasonic systems	+
Manual application	o
<p>++ = ideal for application, + = recommended, o = optionally applicable, - = not recommended</p> <p>Note: The spreadsheet only shows a general overview of the product specifications.</p> <p>Cleaning tests are reasonable to determine the optimum cleaner configuration. Such tests may be carried out directly at the kolb demonstration center in Willich / Germany or Shanghai / China or can be initiated by contacting your local kolb partner..</p>	

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