

Safety Data Sheet

according to UK REACH Regulation

MultiEx 3D-E14 RM

Revision date: 29.11.2018

Product code: 090646-RM

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Electronics cleaner for spray and immersion plants

1.3. Details of the supplier of the safety data sheet

Company name:	kolb Cleaning Technology GmbH	
Street:	Karl-Arnold-Str. 12	
Place:	D-47877 Willich	
Telephone:	+49-2154-947938	Telefax: +49-2154-947947
e-mail:	info@kolb-ct.com	
Contact person:	Herr Linker	Telephone: +49-2324-97980
e-mail:	christian.linker@kolb-ct.com	
Internet:	www.kolb-ct.com	
Responsible Department:	Labor/ QS	

1.4. Emergency telephone number:

+49/ (0) 23 24/ 979817 (EU)
+61 4 19 809 805 (Australia)
+1 970 443 9233 (USA)
Schweiz: 145

Further Information

Australia:	USA:
kolb Cleaning Technology AP PTY LTD	kolb USA LLC
6/150 Canterbury Road	410 Sunset, Unit C
NSW 2200 Bankstown	80501 Longmont – CO
Phone: +61 2 97900273	Phone 001- 970-532-5100
Mobile +61 4 19 809 805	Mobile: 001- 970-443-9233

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2A

Hazard Statements:

Causes serious eye irritation.

Causes skin irritation.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

2-aminoethanol; ethanolamine

Signal word: Warning

Pictograms:



Hazard statements

H319 Causes serious eye irritation.

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H315 Causes skin irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional advice on labelling

UFI: 91D0-10DW-S009-F9RR

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Cleaner on the basis of (according to EC Detergents Regulation 648/2004): glycols, alcohols, alkalis, phosphonic acid derivatives.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
111109-77-4	dipropylene			15 - < 30 %
	404-640-5		01-0000015420-83	
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem			10-< 15 %
	252-104-2		01-2119450011-60	
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether; butyl cellosolve			1-< 5 %
	203-905-0	603-014-00-0		
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H332 H302 H315 H319			
141-43-5	2-aminoethanol; ethanolamine			1-< 5 %
	205-483-3	603-030-00-8		
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B; H332 H312 H302 H314			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			1-< 3 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
37971-36-1	Phosphonobutantricarbonsäure			1 - < 5 %
	253-733-5		01-2119436643-39	
	Eye Irrit. 2; H319			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
111109-77-4	404-640-5	dipropylene dermal: LD50 = >2000 mg/kg; oral: LD50 = 3300 mg/kg	15 - < 30 %
34590-94-8	252-104-2	Dipropylene glycol monomethyl ether, Isomerenngem dermal: LD50 = 19020 mg/kg; oral: LD50 = 5130 mg/kg	10-< 15 % %
111-76-2	203-905-0	2-butoxyethanol; ethylene glycol monobutyl ether; butyl cellosolve inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: ATE 1200 mg/kg	1-< 5 % %
141-43-5	205-483-3	2-aminoethanol; ethanolamine inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 1025 mg/kg; oral: LD50 = 1515 mg/kg STOT SE 3; H335: >= 5 - 100	1-< 5 % %
37971-36-1	253-733-5	Phosphonobutantricarbonsäure dermal: LD50 = 4000 mg/kg; oral: LD50 = 6500 mg/kg Eye Irrit. 2; H319: >= - 100	1 - < 5 %

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

No special measures are necessary.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

Electronics cleaner for spray and immersion plants

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
34590-94-8	(2-methoxymethylethoxy) propanol	50	308		TWA (8 h)	WEL
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	WEL
		3	7.6		STEL (15 min)	WEL
111-76-2	2-Butoxyethanol	25	123		TWA (8 h)	WEL
		50	246		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

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Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
111-76-2	2-Butoxyethanol	butoxyacetic acid (creatinine)	240 mmol/mol	urine	Post shift

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	neutral
Odour:	specific

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C
Flash point:	[see also 9.2] °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
pH-Value (at 20 °C):	11,0
Viscosity / dynamic: (at 20 °C)	30,0 mPa·s
Water solubility: (at 20 °C)	full soluble in water.

Solubility in other solvents

not determined	
Partition coefficient n-octanol/water:	not determined

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Vapour pressure: not determined
Density (at 20 °C): 0,99 g/cm³
Relative vapour density: not determined

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties
Not oxidising.

Other safety characteristics

Solid content: not determined
Evaporation rate: not determined

Further Information

not subject to the requirements of § 4 of the Hazardous Substances Ordinance (GefStoffV)

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

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Acute toxicity

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
111109-77-4	dipropylene					
	oral	LD50 3300 mg/kg	Ratte			
	dermal	LD50 >2000 mg/kg	kaninchen			
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem					
	oral	LD50 5130 mg/kg	Ratte	AMA		
	dermal	LD50 19020 mg/kg	Ratte			
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether; butyl cellosolve					
	oral	ATE 1200 mg/kg				
	inhalation vapour	ATE 11 mg/l				
	inhalation dust/mist	ATE 1,5 mg/l				
141-43-5	2-aminoethanol; ethanolamine					
	oral	LD50 1515 mg/kg	Rat			
	dermal	LD50 1025 mg/kg	Rabbit	IUCLID		
	inhalation vapour	ATE 11 mg/l				
	inhalation dust/mist	ATE 1,5 mg/l				
37971-36-1	Phosphonobutantricarbonsäure					
	oral	LD50 6500 mg/kg	Rat			
	dermal	LD50 4000 mg/kg	Rat			

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
111109-77-4	dipropylene					
	Acute fish toxicity	LC50 >100 mg/l	96 h			
	Acute crustacea toxicity	EC50 >100 mg/l	48 h			
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem					
	Acute fish toxicity	LC50 >10000 mg/l	96 h	Pimephales promelas (Amerikan. Elritze)		
	Acute algae toxicity	ErC50 >969 mg/l	96 h	Alge		
	Acute crustacea toxicity	EC50 1919 mg/l	48 h	Daphnia magna (Wasserfloh)		
	Crustacea toxicity	NOEC 12 mg/l		Daphnia magna (Wasserfloh)		
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether; butyl cellosolve					
	Acute fish toxicity	LC50 1490 mg/l	96 h	Lepomis macrochirus		
141-43-5	2-aminoethanol; ethanolamine					
	Acute fish toxicity	LC50 150 mg/l	96 h	Onchorhynchus mykiss	IUCLID	
	Acute algae toxicity	ErC50 22 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 65 mg/l	48 h	Daphnia magna		
37971-36-1	Phosphonobutantricarbonsäure					
	Acute fish toxicity	LC50 1042 mg/l	96 h			
	Acute algae toxicity	ErC50 611 mg/l	72 h			
	Acute crustacea toxicity	EC50 1071 mg/l	48 h			

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
111109-77-4	dipropylene				
	Zahn-Wellens-Test (Methode C.9)	25%	28		
	schwer biologisch abbaubar				
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem				
	OECD 301E	>70%	28		
	biologisch abbaubar				

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
111109-77-4	dipropylene	0,42
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem	-0,6
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether; butyl cellosolve	0,81 (25°C)
141-43-5	2-aminoethanol; ethanolamine	-1,91 (25°C)

BCF

CAS No	Chemical name	BCF	Species	Source
111109-77-4	dipropylene	4		

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

2010/75/EU (VOC): 9,4 % (93,06 g/l)

2004/42/EC (VOC): 9,4 % (93,06 g/l)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)