

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MultiEx SC

Revision date: 29.11.2018

Product code: 090677-RM

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

1.1. Product identifier

MultiEx SC

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

Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Harmful if swallowed.

Harmful in contact with skin.

Causes serious eye irritation.

Causes skin irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

1-aminopropan-2-ol; isopropanolamine

Signal word: Warning

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Pictograms:



Hazard statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

Precautionary statements

P501	Dispose of contents/container to in accordance with local/regional/national/international regulations.
P280	Wear protective gloves/protective clothing/eye protection/face 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.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

UFI: 7910-S049-G00E-RMWP

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Cleaner for the electronics industry on the basis of (EG 648/2004 VO detergents): Alkyle propylene glycole, glycols

Sum formula: MultiEx SC

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem	15 - < 20 %		
	252-104-2		01-2119450011-60	
111-76-2	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	5-<10 %		
	203-905-0	603-014-00-0		
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2; H332 H312 H302 H319 H315			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	1 - < 5 %		
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
78-96-6	1-aminopropan-2-ol; isopropanolamine	1-< 5 %		
	201-162-7	603-082-00-1		
	Skin Corr. 1B; H314			

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

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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. Medical treatment necessary.

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. Medical treatment necessary.

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

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

Absorb with liquid-binding material (e.g. 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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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Advice on protection against fire and explosion

No special fire protection measures are necessary.

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.

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
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

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

Protective and hygiene measures

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.

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: colourless

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Odour:	specific	
pH-Value:		not measurable
Changes in the physical state		
Melting point:		not determined
Initial boiling point and boiling range:		not determined
Flash point:		not determined
Flammability		
Solid:		not applicable
Gas:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Auto-ignition temperature		
Solid:		not applicable
Gas:		not applicable
Decomposition temperature:		not determined
Oxidizing properties		
Not oxidising.		
Vapour pressure: (at 20 °C)		not determined
Density (at 20 °C):		1,00 g/cm ³
Water solubility:		full soluble in water.
Solubility in other solvents		
not determined		
Partition coefficient:		not determined
Viscosity / dynamic: (at 20 °C)		22 mPa·s
Vapour density:		not determined
Evaporation rate:		not determined
9.2. Other information		
Solid content:		not determined

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.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Harmful in contact with skin.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem				
	oral	LD50 5130 mg/kg	Ratte		
	dermal	LD50 13000-14000 mg/kg	Kanincheb		
111-76-2	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve				
	oral	LD50 470 mg/kg	Rat		
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
78-96-6	1-aminopropan-2-ol; isopropanolamine				
	oral	LD50 2700 mg/kg	Rat		
	dermal	LD50 1600 mg/kg	Rabbit		

Irritation and corrosivity

Causes serious eye irritation.

Causes skin irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

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
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; ethyleneglycol monobutyl ether; butyl cellosolve					
	Acute fish toxicity	LC50 1490 mg/l	96 h	Lepomis macrochirus		
78-96-6	1-aminopropan-2-ol; isopropanolamine					
	Acute fish toxicity	LC50 220 - 460 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 23 mg/l	72 h	Desmodesmus subspicatus	IUCLID	
	Acute crustacea toxicity	EC50 108,8 mg/l	48 h	Daphnia	IUCLID	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem				
	OECD 301E	>70%	28		
	biologisch abbaubar				

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem	-0,6
111-76-2	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	0,81 (25°C)
78-96-6	1-aminopropan-2-ol; isopropanolamine	-0,96

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Advice on disposal

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

Waste disposal number of waste from residues/unused products

070604 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; other organic solvents, washing liquids and mother liquors; hazardous waste

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. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): 12,5 % (125 g/l)

2004/42/EC (VOC): 12,5 % (125 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 juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

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

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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.)