

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 1 of 9

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

1.1. Product identifier

MultiEx VR-18

UFI: RQU2-00SE-9007-554C

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: Christian 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: kolb Cleaning Technology AP PTY LTD
6/150 Canterbury Road
NSW 2200 Bankstown
Phone: +61 2 97900273
Mobile +61 4 19 809 805

USA: kolb USA LLC
410 Sunset, Unit C
80501 Longmont – CO
Phone 001- 970-532-5100
Mobile: 001- 970-443-9233

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Irrit. 2; H315
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 2 of 9

P301+P330+P331	protection.
P303+P361+P353	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P332+P313	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

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): polyhydric alcohols, @000000000033, @000000000062, alkalis

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	15 - < 30 %
	203-961-6	
	603-096-00-8	
	Eye Irrit. 2; H319	
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem	5 - < 15 %
	252-104-2	
	01-2119450011-60	
78-96-6	1-aminopropan-2-ol; isopropanolamine	1 - < 5 %
	201-162-7	
	603-082-00-1	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H312 H314 H318	

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
112-34-5	203-961-6	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	15 - < 30 %
		dermal: LD50 = 2746 mg/kg; oral: LD50 = 5660 mg/kg	
34590-94-8	252-104-2	Dipropylene glycol monomethyl ether, Isomerengem	5 - < 15 %
		dermal: LD50 = 19020 mg/kg; oral: LD50 = 5130 mg/kg	
78-96-6	201-162-7	1-aminopropan-2-ol; isopropanolamine	1 - < 5 %
		dermal: LD50 = 1851 mg/kg; oral: LD50 = 2813 mg/kg	

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 plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 3 of 9

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 1 glass 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

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

For cleaning up

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.

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 4 of 9

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, drink, smoke, sniff. 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

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
34590-94-8	(2-Methoxymethylethoxy)-l-propanol	50	308		TWA (8 h)	
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	
		15	101.2		STEL (15 min)	

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

Use of 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: transparent
 Odour: specific

Test method

Melting point/freezing point: -5 °C
 Boiling point or initial boiling point and boiling range: 100 °C
 Flammability: not determined

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 5 of 9

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	11,2 @ 50g/ 1 l Water
Viscosity / kinematic: (at 20 °C)	23 mm ² /s DIN 51562
Water solubility: (at 20 °C)	full soluble in water.
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	0,996 g/cm ³ ASTM D 1298
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:

not determined

Solid content:

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 Regulation (EC) No 1272/2008

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) 74040 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l



Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 6 of 9

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether				
	oral	LD50 5660 mg/kg			
	dermal	LD50 2746 mg/kg			
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem				
	oral	LD50 5130 mg/kg	Ratte	AMA	
	dermal	LD50 19020 mg/kg	Ratte		
78-96-6	1-aminopropan-2-ol; isopropanolamine				
	oral	LD50 2813 mg/kg			
	dermal	LD50 1851 mg/kg			

11.2. Information on other hazards

Further information

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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether					
	Acute fish toxicity	LC50 1300 mg/l	96 h			
	Acute algae toxicity	ErC50 100 mg/l				
	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)		
78-96-6	1-aminopropan-2-ol; isopropanolamine					
	Acute fish toxicity	LC50 1000 mg/l	96 h			
	Acute crustacea toxicity	EC50 108,82 mg/l	48 h			

12.2. Persistence and degradability

The product has not been tested.

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 7 of 9

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

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 REACH, annex XIII.

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

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

SECTION 15: Regulatory information

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

EU regulatory information

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 8 of 9

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 55, Entry 75

Directive 2010/75/EU on industrial emissions: 15,5 % (154,38 g/l)

Directive 2004/42/EC on VOC in paints and varnishes: 38,9 % (387,444 g/l)

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Regulation (EC) No. 648/2004 [Detergents regulation]. 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%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).



CLEANING TECHNOLOGY
Made in Germany

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (Revision 2020/878)

MultiEx VR-18

Revision date: 04.01.2024

Product code: 090655-RM

Page 9 of 9

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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