

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR

Revision date: 29.11.2018

Product code: 090629-RM

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

### 1.1. Product identifier

MultiEx VR

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

#### Use of the substance/mixture

Industrial uses

### 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:	USA:
kolb Cleaning Technology AP PTY LTD	kolb USA LLC
6/150 Canterbury Road	410 Sunset, Unit C
NSW 2200 Bankstown	80501 Longmont – CO

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

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

Hazard Statements:

May cause respiratory irritation.

Causes skin and eye irritation.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

#### Hazard components for labelling

2-aminoethanol; ethanolamine

Signal word: Warning

Pictograms:



#### Hazard statements

H335 May cause respiratory irritation.

H315+H320 Causes skin and eye irritation.

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#### Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P363 Wash contaminated clothing 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: 93C0-F0TJ-D00U-5JC1

#### 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, polyhydric alcohols, alkalis

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
141-43-5	2-aminoethanol; ethanolamine			5-< 10 %
	205-483-3	603-030-00-8		
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B; H332 H312 H302 H314			

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	
141-43-5	205-483-3	2-aminoethanol; ethanolamine	5-< 10 %
		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	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

##### After inhalation

Provide fresh air. Medical treatment necessary.

##### After contact with skin

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

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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#### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

#### 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

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

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

#### 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.

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#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

##### Hints on joint storage

No special measures are necessary.

#### 7.3. Specific end use(s)

Industrial uses

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	
		3	7.6		STEL (15 min)	

#### 8.2. Exposure controls

##### Appropriate engineering controls

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

##### 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: colourless  
 Odour: Amines

##### Changes in the physical state

Melting point/freezing point: not determined  
 Boiling point or initial boiling point and boiling range: not determined  
 Flash point: not determined

##### Flammability

Solid/liquid: not applicable  
 not applicable

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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): 10,9

Viscosity / dynamic:  
(at 20 °C) 45 mPa·sViscosity / kinematic:  
(at 40 °C) 23 mm<sup>2</sup>/s

Water solubility: easily soluble

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure:  
(at 20 °C) not determinedDensity (at 20 °C): 0,965 g/cm<sup>3</sup>

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****SECTION 10: Stability and reactivity****10.1. Reactivity**

Possibility of hazardous reactions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Exothermic reaction with: Base, Peroxides, Oxidising agent.

**10.4. Conditions to avoid**

none

**10.5. Incompatible materials**

Keep away from: Base, Oxidising agent, Peroxides.

**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**

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#### Acute toxicity

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
141-43-5	2-aminoethanol; ethanolamine					
	oral	LD50 mg/kg	1515	Rat		
	dermal	LD50 mg/kg	1025	Rabbit	IUCLID	
	inhalation vapour	ATE	11 mg/l			
	inhalation dust/mist	ATE	1,5 mg/l			

#### 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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
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	

#### 12.2. Persistence and degradability

The product has not been tested.

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
141-43-5	2-aminoethanol; ethanolamine	-1,91 (25°C)

#### 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

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#### 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

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; 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. 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

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): 8,971 % (86,572 g/l)

2004/42/EC (VOC): 8,971 % (86,572 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

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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)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315+H320	Causes skin and eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

#### 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.)*