

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MultiEx VR

Revision date: 11.04.2017

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: | 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/ 988 12 85 (EU)
+61 4 19 809 805 (Australia)
+1 970 443 9233 (USA)

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.

Precautionary statements

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

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- 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/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.

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 according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 141-43-5 | 2-aminoethanol, ethanolamine | | | < 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.

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.

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

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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

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

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.

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

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

Industrial uses

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|----------------|-----|-------------------|-----------|---------------|--------|
| 141-43-5 | 2-Aminoethanol | 1 | 2.5 | | TWA (8 h) | WEL |
| | | 3 | 7.6 | | STEL (15 min) | WEL |

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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.

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 |
| Odour: | Amines |

| | Test method |
|----------------------|-------------|
| pH-Value (at 20 °C): | 10,9 |

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): | 0,965 g/cm ³ |
| Water solubility: | easily soluble |

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Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:
(at 20 °C)

45 mPa·s

Viscosity / kinematic:
(at 40 °C)

23 mm²/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

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 toxicological effects

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 |
| | inhalative vapour | ATE | 11 mg/l | | |
| | inhalative aerosol | 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.

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| 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 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

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

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
Classified as 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



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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): 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 juvenils according to the 'juvenile work protection guideline' (94/33/EC).

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

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)

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.)