

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MultiEx A12

Revision date: 25.01.2018

Product code: 090607-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

Regulation (EC) No. 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements

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, alkalis, polyhydric alcohols, defoamers

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Hazardous components

| CAS No | Chemical name | | | Quantity |
|------------|--|----------|------------------|-----------|
| | EC No | Index No | REACH No | |
| | Classification according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 34590-94-8 | Dipropylene glycol monomethyl ether, Isomerengem | | | 15 - 20 % |
| | 252-104-2 | | 01-2119450011-60 | |
| 111-76-2 | 2-Butoxyethanol | | | < 10 % |
| | 203-905-0 | | 01-2119475108-36 | |
| | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H332 H312 H302 H315 H319 | | | |
| 141-43-5 | 2-Aminoethanol (vgl.Ethanolamin) | | | 1 - <5 % |
| | 205-483-3 | | 01-2119486455-28 | |
| | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Chronic 3; H332 H312 H302 H314 H335 H412 | | | |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

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

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. 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

Use personal protection equipment. Avoid contact with skin, eyes and clothes.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

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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

Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Water-based surface treatment agents, solvent content up to 15%

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

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 |
| | | - | - | | STEL (15 min) | 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 |

Biological Monitoring Guidance Values (EH40)

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

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DNEL/DMEL values

| CAS No | Substance | | |
|--------------------------|----------------------------|----------|------------------------|
| DNEL type | Exposure route | Effect | Value |
| 102-71-6 | 2,2',2''-Nitrilotriethanol | | |
| Worker DNEL, long-term | dermal | systemic | 6,3 mg/kg bw/day |
| Worker DNEL, long-term | inhalation | systemic | 5 mg/m ³ |
| Worker DNEL, long-term | inhalation | local | 5 mg/m ³ |
| Consumer DNEL, long-term | dermal | systemic | 3,1 mg/kg bw/day |
| Consumer DNEL, long-term | inhalation | systemic | 1,25 mg/m ³ |
| Consumer DNEL, long-term | inhalation | local | 1,25 mg/m ³ |
| Consumer DNEL, long-term | oral | systemic | 13 mg/kg bw/day |

PNEC values

| CAS No | Substance | |
|--|----------------------------|--|
| Environmental compartment | Value | |
| 102-71-6 | 2,2',2''-Nitrilotriethanol | |
| Freshwater | 0,32 mg/l | |
| Marine water | 0,032 mg/l | |
| Freshwater sediment | 1,7 mg/kg | |
| Marine sediment | 0,17 mg/kg | |
| Micro-organisms in sewage treatment plants (STP) | 10 mg/l | |
| Soil | 0,151 mg/kg | |
| Air | 5,12 mg/l | |

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

Wear eye protection/face protection.

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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | |
|----------------------|------------|------|
| Physical state: | Liquid | |
| Colour: | colourless | |
| Odour: | specific | |
| pH-Value (at 20 °C): | | 10,8 |

Changes in the physical state

| | | |
|--|--|----------------|
| Melting point: | | not determined |
| Initial boiling point and boiling range: | | not determined |
| Flash point: | | 100 °C |

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): | | 0,990 g/cm ³ |
| Water solubility: | | easily soluble |

Solubility in other solvents

| | | |
|------------------------------------|--|----------------|
| not determined | | |
| Partition coefficient: | | not determined |
| Viscosity / dynamic: (at 20 °C) | | 30 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

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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 toxicological effects

Acute toxicity

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

| 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 | | | | |
| | oral | ATE 500 mg/kg | | | |
| | dermal | ATE 1100 mg/kg | | | |
| | inhalative vapour | ATE 11 mg/l | | | |
| | inhalative aerosol | ATE 1,5 mg/l | | | |
| 141-43-5 | 2-Aminoethanol (vgl.Ethanolamin) | | | | |
| | oral | ATE 500 mg/kg | | | |
| | dermal | ATE 1100 mg/kg | | | |
| | inhalative vapour | ATE 11 mg/l | | | |
| | inhalative aerosol | ATE 1,5 mg/l | | | |

Irritation and corrosivity

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

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 not 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 mg/l | >10000 | 96 h | Pimephales promelas (Amerikan. Elritze) | |
| | Acute algae toxicity | ErC50 mg/l | >969 | 96 h | Alge | |
| | Acute crustacea toxicity | EC50 mg/l | 1919 | 48 h | Daphnia magna (Wasserfloh) | |
| | Crustacea toxicity | NOEC | 12 mg/l | | Daphnia magna (Wasserfloh) | |

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 |

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

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.

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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): 14,207 % (140,649 g/l)

2004/42/EC (VOC): 14,207 % (140,649 g/l)

Additional information

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

National regulatory information

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 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |

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



CLEANING TECHNOLOGY
Made in Germany

kolb Cleaning Technology GmbH

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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.)