

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx 3D-E14 RM

Revision date: 31.08.2023

Product code: 090646-RM

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

### 1.1. Product identifier

MultiEx 3D-E14 RM

UFI: 91D0-10DW-S009-F9RR

### 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:                          | 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

#### GB CLP Regulation

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

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

Hazard Statements:

Causes serious eye irritation.

Causes skin irritation.

### 2.2. Label elements

#### GB CLP Regulation

##### Hazard components for labelling

2-aminoethanol; ethanolamine

Signal word: Warning

Pictograms:



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#### Hazard statements

H319 Causes serious eye irritation.  
H315 Causes skin irritation.

#### Precautionary statements

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

#### 2.3. Other hazards

No information available.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Cleaner on the basis of (according to EC Detergents Regulation 648/2004): glycols, alcohols, alkalis, phosphonic acid derivatives.

#### Hazardous components

| CAS No     | Chemical name   |              |                  | Quantity   |
|------------|---|--------------|------------------|------------|
|            | EC No   | Index No     | REACH No         |            |
|            | Classification (GB CLP Regulation)  |              |                  |            |
| 34590-94-8 | Dipropylene glycol monomethyl ether, Isomerengem  |              |                  | 5 - < 15 % |
|            | 252-104-2   |              | 01-2119450011-60 |            |
| 111-76-2   | 2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve   |              |                  | 1 - < 5 %  |
|            | 203-905-0   | 603-014-00-0 |                  |            |
|            | Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H331 H302 H315 H319                                  |              |                  |            |
| 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   |              |                  |            |
| 141-43-5   | 2-aminoethanol; ethanolamine  |              |                  | 1 - < 5 %  |
|            | 205-483-3   | 603-030-00-8 |                  |            |
|            | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H332 H312 H302 H314 H318 H335 |              |                  |            |

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

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#### Specific Conc. Limits, M-factors and ATE

| CAS No     | EC No     | Chemical name  | Quantity   |
|------------|-----------|--|------------|
|            |           | Specific Conc. Limits, M-factors and ATE   |            |
| 34590-94-8 | 252-104-2 | Dipropylene glycol monomethyl ether, Isomerengem   | 5 - < 15 % |
|            |           | dermal: LD50 = 19020 mg/kg; oral: LD50 = 5130 mg/kg  |            |
| 111-76-2   | 203-905-0 | 2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve  | 1 - < 5 %  |
|            |           | inhalation: ATE 3 mg/l (vapours); dermal: LD50 = 435 mg/kg; oral: ATE 1200 mg/kg   |            |
| 67-63-0    | 200-661-7 | propan-2-ol; isopropyl alcohol; isopropanol  | 1 - < 5 %  |
|            |           | dermal: LD50 = 12800 mg/kg; oral: LD50 = 5050 mg/kg  |            |
| 141-43-5   | 205-483-3 | 2-aminoethanol; ethanolamine   | 1 - < 5 %  |
|            |           | inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 2504 mg/kg; oral: LD50 = 1089 mg/kg STOT SE 3; H335: >= 5 - 100 |            |

#### 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. If skin irritation occurs: Get medical advice/attention.

###### 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.

##### 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.

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#### **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**

No special measures are necessary.

##### **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.

#### **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**

##### **Exposure limits (EH40)**

| CAS No     | Substance                        | ppm | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|------------|----------------------------------|-----|-------------------|-----------|---------------|--------|
| 34590-94-8 | (2-methoxymethylethoxy) propanol | 50  | 308               |           | TWA (8 h)     | 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    |
| 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    |

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#### 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

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:   | neutral  |                        |
| Odour:  | specific |                        |
| Melting point/freezing point:                             |          | not determined         |
| Boiling point or initial boiling point and boiling range: |          | 100 °C                 |
| Flammability:   |          | not applicable         |
|   |          | not applicable         |
| Lower explosion limits:                                   |          | not determined         |
| Upper explosion limits:                                   |          | not determined         |
| Flash point:  |          | > 100 °C               |
| Decomposition temperature:                                |          | not determined         |
| pH-Value (at 20 °C):                                      |          | 11,0                   |
| Water solubility:<br>(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):                                       |          | 0,99 g/cm <sup>3</sup> |
| Relative vapour density:                                  |          | not determined         |

#### 9.2. Other information

##### Information with regard to physical hazard classes

###### Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

###### Oxidizing properties

Not oxidising.

##### Other safety characteristics

Evaporation rate:

not determined

Solid content:

not determined

Viscosity / dynamic:  
(at 20 °C)

30,0 mPa·s

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#### 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 GB CLP Regulation

##### Acute toxicity

| CAS No     | Chemical name   |                  |         |        |        |
|------------|---|------------------|---------|--------|--------|
|            | Exposure route  | Dose             | Species | Source | Method |
| 34590-94-8 | Dipropylene glycol monomethyl ether, Isomerengem                  |                  |         |        |        |
|            | oral  | LD50 5130 mg/kg  | Ratte   | AMA    |        |
|            | dermal  | LD50 19020 mg/kg | Ratte   |        |        |
| 111-76-2   | 2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve |                  |         |        |        |
|            | oral  | ATE 1200 mg/kg   |         |        |        |
|            | dermal  | LD50 435 mg/kg   | Rabbit  |        |        |
|            | inhalation vapour   | ATE 3 mg/l       |         |        |        |
| 67-63-0    | propan-2-ol; isopropyl alcohol; isopropanol                       |                  |         |        |        |
|            | oral  | LD50 5050 mg/kg  | Rat     |        |        |
|            | dermal  | LD50 12800 mg/kg | Rabbit  |        |        |
| 141-43-5   | 2-aminoethanol; ethanolamine                                      |                  |         |        |        |
|            | oral  | LD50 1089 mg/kg  | Rat     |        |        |
|            | dermal  | LD50 2504 mg/kg  | Rabbit  |        |        |
|            | 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].

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## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

| 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 1474 mg/l   | 96 h      |   |        |        |
|            | Acute algae toxicity  | ErC50 1232 mg/l  | 72 h      |   |        |        |
|            | Acute crustacea toxicity  | EC50 1800 mg/l   | 48 h      |   |        |        |
| 67-63-0    | propan-2-ol; isopropyl alcohol; isopropanol                       |                  |           |   |        |        |
|            | Acute fish toxicity   | LC50 9640 mg/l   | 96 h      |   |        |        |
|            | Acute crustacea toxicity  | EC50 1400 mg/l   | 48 h      |   |        |        |
| 141-43-5   | 2-aminoethanol; ethanolamine                                      |                  |           |   |        |        |
|            | Acute fish toxicity   | LC50 349 mg/l    | 96 h      |   |        |        |
|            | Acute algae toxicity  | ErC50 2,8 mg/l   | 72 h      |   |        |        |
|            | Acute crustacea toxicity  | EC50 65 mg/l     | 48 h      |   |        |        |

### 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

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The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

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

#### **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, Entry 40

2010/75/EU (VOC): 9,4 % (93,06 g/l)

2004/42/EC (VOC): 9,4 % (93,06 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



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#### **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)**

|      |  |
|------|--|
| 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.                  |
| H318 | Causes serious eye damage.               |
| H319 | Causes serious eye irritation.           |
| H331 | Toxic if inhaled.                        |
| H332 | Harmful if inhaled.                      |
| H335 | May cause respiratory irritation.        |
| 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.)*