

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 1 of 9

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

### 1.1. Product identifier

MultiEx 3D-B1

#### Further trade names

Old name: MultiEx 3D-E14 BAW

### 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

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

Hazard categories:  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Irrit. 2A  
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:



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 2 of 9

#### 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/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.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P310 Immediately call a POISON CENTER/doctor.  
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: 6GH0-C09J-Q001-U223

#### 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): Alkyle propylene glycole, alkalis, glycols

#### 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                                                  | 50-< 60 %    |
|          | 203-961-6                                                                                                     | 603-096-00-8 |
|          | Eye Irrit. 2; H319                                                                                            |              |
| 141-43-5 | 2-aminoethanol; ethanolamine                                                                                  | 5 - < 15 %   |
|          | 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.

#### 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                                                                                                     | 50-< 60 %  |
|          |           | dermal: LD50 = 4120 mg/kg; oral: LD50 = 5660 mg/kg                                                                                                               |            |
| 141-43-5 | 205-483-3 | 2-aminoethanol; ethanolamine                                                                                                                                     | 5 - < 15 % |
|          |           | 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 3 of 9

#### **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 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**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), 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**

##### **General advice**

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

#### **6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment.

#### **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**

Do not breathe gas/fumes/vapour/spray.

##### **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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 4 of 9

drink.

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

##### Requirements for storage rooms and vessels

Keep container tightly closed.

##### Hints on joint storage

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

## 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 |
|----------|---------------------------|-----|-------------------|---------------------|---------------|--------|
| 112-34-5 | 2-(2-Butoxyethoxy)ethanol | 10  | 67.5              |                     | TWA (8 h)     |        |
|          |                           | 15  | 101.2             |                     | STEL (15 min) |        |
| 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  
 Zustandsänderung: < 0 °C  
 Flash point: [see also 9.2] °C

#### Flammability

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 5 of 9

|                                        |                                  |
|----------------------------------------|----------------------------------|
| Solid/liquid:                          | not applicable<br>not applicable |
| Lower explosion limits:                | not determined                   |
| Upper explosion limits:                | not determined                   |
| <b>Self-ignition temperature</b>       |                                  |
| Solid:                                 | not applicable                   |
| Gas:                                   | not applicable                   |
| Decomposition temperature:             | not determined                   |
| pH-Value (at 202 °C):                  | 11,1                             |
| Viscosity / dynamic:<br>(at 20 °C)     | 30 mPa·s                         |
| Water solubility:                      | full soluble in water.           |
| <b>Solubility in other solvents</b>    |                                  |
| not determined                         |                                  |
| Partition coefficient n-octanol/water: | not determined                   |
| Vapour pressure:<br>(at 20 °C)         | not determined                   |
| Density (at 20 °C):                    | 0,98 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**

|                   |                |
|-------------------|----------------|
| Solvent content:  | >50            |
| Solid content:    | not determined |
| Evaporation rate: | 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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 6 of 9

#### Acute toxicity

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

| CAS No   | Chemical name                                                |               |          |         |        |        |
|----------|--------------------------------------------------------------|---------------|----------|---------|--------|--------|
|          | Exposure route                                               | Dose          |          | Species | Source | Method |
| 112-34-5 | 2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether |               |          |         |        |        |
|          | oral                                                         | LD50<br>mg/kg | 5660     | Rat     |        |        |
|          | dermal                                                       | LD50<br>mg/kg | 4120     | Rabbit  |        |        |
| 141-43-5 | 2-aminoethanol; ethanolamine                                 |               |          |         |        |        |
|          | oral                                                         | LD50<br>mg/kg | 1089     | Rat     |        |        |
|          | dermal                                                       | LD50<br>mg/kg | 2504     | Rabbit  |        |        |
|          | inhalation vapour                                            | ATE           | 11 mg/l  |         |        |        |
|          | inhalation dust/mist                                         | ATE           | 1,5 mg/l |         |        |        |

#### Irritation and corrosivity

Causes skin and eye irritation.

#### 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

May cause respiratory irritation. (2-aminoethanol; ethanolamine)

#### 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 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 algae toxicity                                         | ErC50<br>mg/l | > 100     |         | Scenedesmus sp. |        |
|          | Acute crustacea toxicity                                     | EC50<br>mg/l  | > 100     | 48 h    | Daphnia magna   |        |
| 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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 7 of 9

#### **12.3. Bioaccumulative potential**

The product has not been tested.

#### **Partition coefficient n-octanol/water**

| CAS No   | Chemical name                                                | Log Pow     |
|----------|--------------------------------------------------------------|-------------|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether | 0,56 (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**

##### **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**

070604 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; 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)**

##### **14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

##### **14.2. UN proper shipping name:**

No dangerous good in sense of these transport regulations.

##### **14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

##### **14.4. Packing group:**

No dangerous good in sense of this transport regulation.

#### **Inland waterways transport (ADN)**

##### **14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

##### **14.2. UN proper shipping name:**

No dangerous good in sense of these transport regulations.

##### **14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

##### **14.4. Packing group:**

No dangerous good in sense of this transport regulation.

#### **Marine transport (IMDG)**

##### **14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

##### **14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

##### **14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

##### **14.4. Packing group:**

No dangerous good in sense of this transport regulation.

#### **Air transport (ICAO-TI/IATA-DGR)**

##### **14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

##### **14.2. UN proper shipping name:**

No dangerous good in sense of these transport regulations.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 8 of 9

**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.

**14.4. Packing group:** No dangerous good in sense of this transport regulation.

#### 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 55

2010/75/EU (VOC): 5,263 % (51,573 g/l)

2004/42/EC (VOC): 56,163 % (550,393 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

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.  
H318 Causes serious eye damage.  
H319 Causes serious 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





CLEANING TECHNOLOGY  
Made in Germany

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx 3D-B1

Revision date: 29.11.2018

Product code: 090609-RM

Page 9 of 9

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.)*