

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 1 of 9

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

### 1.1. Product identifier

MultiEx B11 CN

### 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

#### GB CLP Regulation

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

May cause respiratory irritation.

Causes skin and eye irritation.

### 2.2. Label elements

#### GB CLP Regulation

#### Hazard components for labelling

2-aminoethanol; ethanolamine

Signal word: Warning

Pictograms:



#### Hazard statements

H335

May cause respiratory irritation.

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 2 of 9

H315+H320 Causes skin and eye irritation.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 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: FMC0-G0XX-700T-4KUE

#### 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): polyhydric alcohols, glycols, alkalis, pH regulators

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
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; H332 H312 H302 H314			
111-76-2	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve			5 - < 15 %
	203-905-0	603-014-00-0		
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H332 H302 H315 H319			
141-43-5	2-aminoethanol; ethanolamine			< 0.1 %
	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.

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 3 of 9

#### 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 - < 15 %
		inhalation: LC50 = 1,49 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 2693 mg/kg; oral: LD50 = 1302 mg/kg STOT SE 3; H335: >= 5 - 100	
111-76-2	203-905-0	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	5 - < 15 %
		inhalation: LC50 = 662 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 435 mg/kg; oral: ATE 1200 mg/kg	
141-43-5	205-483-3	2-aminoethanol; ethanolamine	< 0.1 %
		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

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

###### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

###### After ingestion

Observe risk of aspiration if vomiting occurs. 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

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

##### Additional information

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

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

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 4 of 9

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**

Take off contaminated clothing. Wash hands before breaks and after work. 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
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 (creatinine)	240 mmol/mol	urine	Post shift

#### **8.2. Exposure controls**

##### **Individual protection measures, such as personal protective equipment**

##### **Eye/face protection**

Wear eye/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.

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 5 of 9

#### 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:	yellowish
Odour:	specific

#### Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	180-243 °C
Flash point:	[see also 9.2 ] °C

#### Flammability

Solid/liquid:	not applicable
Gas:	not applicable
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): 11,1

Viscosity / kinematic:  
(at 40 °C) 22 mm<sup>2</sup>/s

Water solubility: easily soluble

#### Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure: not determined

Density (at 20 °C): 0,955 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

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 6 of 9

#### 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
141-43-5	2-aminoethanol; ethanolamine				
	oral	LD50 1302 mg/kg			
	dermal	LD50 2693 mg/kg			
	inhalation (4 h) vapour	LC50 1,49 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
111-76-2	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve				
	oral	ATE 1200 mg/kg			
	dermal	LD50 435 mg/kg	Rabbit		
	inhalation (1 h) vapour	LC50 662 mg/l	Guinea pig		
	inhalation dust/mist	ATE 1,5 mg/l			
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 not hazardous according to regulation (EC) No 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
141-43-5	2-aminoethanol; ethanolamine					
	Acute fish toxicity	LC50 349 mg/l	96 h			
	Acute algae toxicity	ErC50 2,6 mg/l	72 h			
	Acute crustacea toxicity	EC50 46 mg/l	48 h			
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			
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.

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

The product has not been tested.

#### **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 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**

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)**

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 8 of 9

- 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 75

2010/75/EU (VOC): 12,688 % (121,172 g/l)

2004/42/EC (VOC): 12,688 % (121,172 g/l)

#### Additional information

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

#### National regulatory information

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 Causes skin irritation.
- H315+H320 Causes skin and eye irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.





CLEANING TECHNOLOGY  
Made in Germany

## Safety Data Sheet

according to UK REACH Regulation

### MultiEx B11 CN

Revision date: 29.11.2018

Product code: 090637-CN

Page 9 of 9

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.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*