

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 1 of 9

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

### 1.1. Product identifier

MultiEx VR-SP 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/ 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
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. 2

Hazard Statements:

Causes serious eye irritation.

Causes skin irritation.

### 2.2. Label elements

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

#### Hazard components for labelling

1-aminopropan-2-ol, isopropanolamine

**Signal word:** Warning**Pictograms:**

#### Hazard statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 2 of 9

#### Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face 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/shower.  
P390 Absorb spillage to prevent material damage.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
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 for the electronics industry on the basis of (EG 648/2004 VO detergents): polyhydric alcohols, glycols, Alkyle propylene glycole, alkalis, pH regulators

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
78-96-6	1-aminopropan-2-ol, isopropanolamine			< 10 %
	201-162-7	603-082-00-1		
	Skin Corr. 1B; H314			
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			< 10 %
	203-961-6	603-096-00-8		
	Eye Irrit. 2; H319			
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem			5-15 %
	252-104-2			

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

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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 3 of 9

#### **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.

##### **Unsuitable extinguishing media**

Strong water jet

#### **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**

No special measures are necessary.

##### **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.

##### **Advice on storage compatibility**

No special measures are necessary.

#### **7.3. Specific end use(s)**

Electronics cleaner for spray and immersion plants

### SECTION 8: Exposure controls/personal protection

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 4 of 9

#### 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
		-	-		STEL (15 min)	WEL
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL

#### 8.2. Exposure controls

##### 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.

wear hand gloves material: nitril or pvc, 0,5 µ, 4 h

##### 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:	transparent
Odour:	specific

##### Test method

pH-Value (at 20 °C): 11,2 @ 50g/ 1 l Water

##### Changes in the physical state

Melting point:	-5 °C
Initial boiling point and boiling range:	100 °C
Flash point:	[see also 9.2 ] °C

##### Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

##### Auto-ignition temperature

Solid:	not applicable
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## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 5 of 9

Gas:	not applicable
Decomposition temperature:	not determined
<b>Oxidizing properties</b>	
Not oxidising.	
Vapour pressure:	not determined
Density (at 20 °C):	0,996 g/cm <sup>3</sup> ASTM D 1298
Water solubility: (at 20 °C)	full soluble in water.
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient:	not determined
Viscosity / kinematic: (at 20 °C)	23 mm <sup>2</sup> /s DIN 51562
Vapour density:	not determined
Evaporation rate:	not determined

#### **9.2. Other information**

Solid content: not determined

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 toxicological effects**

##### **Acute toxicity**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 6 of 9

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
78-96-6	1-aminopropan-2-ol, isopropanolamine				
	oral	LD50 2700 mg/kg	Rat		
	dermal	LD50 1600 mg/kg	Rabbit		
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether				
	oral	LD50 5660 mg/kg	Rat		
	dermal	LD50 4120 mg/kg	Rabbit		
34590-94-8	Dipropylene glycol monomethyl ether, Isomerengem				
	oral	LD50 5130 mg/kg	Ratte		
	dermal	LD50 13000- 14000 mg/kg	Kanincheb		

#### Irritation and corrosivity

Causes serious eye irritation.  
Causes skin 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

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 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 Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
78-96-6	1-aminopropan-2-ol, isopropanolamine					
	Acute fish toxicity	LC50 220 - 460 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 23 mg/l	72 h	Desmodesmus subspicatus	IUCLID	
	Acute crustacea toxicity	EC50 108,8 mg/l	48 h	Daphnia	IUCLID	
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether					
	Acute algae toxicity	ErC50 > 100 mg/l		Scenedesmus sp.		
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna		
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)		

#### 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
78-96-6	1-aminopropan-2-ol, isopropanolamine	-0,96
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	0,56 (25°C)
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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 8 of 9

#### 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)

##### 14.1. UN 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:

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:

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:

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.

#### 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

Restrictions on use (REACH, annex XVII):

Entry 55: 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether

2010/75/EU (VOC): 9,5 % (94,62 g/l)

2004/42/EC (VOC): 18,5 % (184,26 g/l)

##### Additional information



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### MultiEx VR-SP CN

Revision date: 30.03.2017

Product code: 090678-CN

Page 9 of 9

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)

H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye 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.)*