

# SAFETY DATA SHEET

## Korsolex basic

Version 4.5      Revision Date: 28.06.2019      SDS Number: R11820      Date of last issue: 26.10.2018  
Date of first issue: 14.03.2017

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Korsolex basic

Product code : R11820

#### Manufacturer or supplier's details

Manufacturer : BODE Chemie GmbH  
Melanchthonstraße 27  
22525 Hamburg  
Tel.: +49 (0)40 / 54 00 60

Supplier :

Responsible Department : Scientific Affairs  
kundenservice-SIDA@bode-chemie.de

Emergency telephone number : Giftnotruf Göttingen  
24h-Phone +49 (0)551 / 1 92 40

#### Recommended use of the chemical and restrictions on use

Recommended use : In-door use  
Disinfectants and general biocidal products  
For further information, refer to the product technical data sheet.

Restrictions on use : Restricted to professional users.

### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion/irritation : Sub-category 1B

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Germ cell mutagenicity : Sub-category 1B

Carcinogenicity : Category 2

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

#### GHS label elements

Hazard pictograms :



Signal word : Danger

# SAFETY DATA SHEET

## Korsolex basic

- Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.  
H411 Toxic to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.
- Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Glutaral	111-30-8	$\geq 10 - < 20$
Formaldehyde	50-00-0	$\geq 5 - < 10$
(ethylenedioxy)dimethanol	3586-55-8	$\geq 3 - < 10$
Tridecanol, branched, ethoxylated	69011-36-5	$\geq 3 - < 10$
Alcohols, C12-14. ethoxylated	68439-50-9	$\geq 3 - < 10$
but-2-yne-1,4-diol	110-65-6	$\geq 0,25 - < 1$

### 4. FIRST AID MEASURES

- General advice : Call a physician immediately.
- If inhaled : Remove to fresh air immediately. Get medical attention immediately.
- In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with plenty of water.
- In case of eye contact : Rinse immediately with plenty of lukewarm water, also under the eyelids, for at least 15 minutes.
- If swallowed : Rinse mouth.  
Do NOT induce vomiting.

# SAFETY DATA SHEET

## Korsolex basic

- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : For specialist advice physicians should contact the Poisons Information Service.  
Keep under medical supervision for at least 48 hours.

### 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray jet  
Dry powder  
Carbon dioxide (CO<sub>2</sub>)  
Foam
- Unsuitable extinguishing media : none
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.
- Environmental precautions : Should not be released into the environment.
- Methods and materials for containment and cleaning up : Clean-up methods - large spillage  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Clean-up methods - small spillage  
Wipe up with absorbent material (e.g. cloth, fleece).  
Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : No special protective measures against fire required.
- Advice on safe handling : Prepare the working solution as given on the label(s) and/or the user instructions.
- Conditions for safe storage : Store at room temperature in the original container.  
Keep tightly closed.
- Materials to avoid : Keep away from food and drink.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	TWA	0,1 ppm	ACGIH
		STEL	0,3 ppm	ACGIH

**Korsolex basic****Occupational exposure limits of decomposition products**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
formaldehyde	50-00-0	TWA	0,1 ppm	ACGIH
		STEL	0,3 ppm	ACGIH

**Personal protective equipment**

Respiratory protection : Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

Filter type : ABEK-filter

Hand protectionIn case of full contact: Nitrile rubber

Material : Protective gloves complying with EN 374.

Break through time : > 480 min

Glove thickness : 0,1 mm

Protective index : Class 6

: Peha-soft nitrile guard

Remarks : In case of full contact: Nitrile rubber

Eye protection : Safety glasses with side-shields conforming to EN166

Skin and body protection : Work uniform or laboratory coat.  
Remove and wash contaminated clothing before re-use.  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with the skin and the eyes.  
Avoid breathing vapours, mist or gas.  
Keep away from food and drink.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : green

Odour : characteristic

pH : 4 (20 °C)

Melting point/range : not determined

Boiling point/boiling range : 100 °C

Flash point : Not applicable

Flammability (solid, gas) : not auto-flammable

Vapour pressure : not determined

Density : 1,09 g/cm<sup>3</sup> (20 °C)

# SAFETY DATA SHEET

## Korsolex basic

Solubility(ies)		
Water solubility	:	completely miscible
Viscosity		
Viscosity, dynamic	:	34 mPa.s ( 20 °C)

---

### 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Avoid amines.
Conditions to avoid	:	Heat Strong sunlight for prolonged periods.
Incompatible materials	:	Amines
Hazardous decomposition products	:	This product may release the following: Formaldehyde (CAS: 50-00-0)

---

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity	:	LD50 Oral(Rat): 484 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 1,29 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 2.891 mg/kg Method: Calculation method

##### Components:

###### **Glutaral (CAS: 111-30-8):**

Acute inhalation toxicity	:	LC50 (Rat, female): 0,28 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Corrosive to the respiratory tract.
---------------------------	---	---

###### **(ethylenedioxy)dimethanol (CAS: 3586-55-8):**

Acute oral toxicity	:	LD50 (Rat, female): 760 mg/kg
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg

###### **Tridecanol, branched, ethoxylated (CAS: 69011-36-5):**

Acute oral toxicity	:	LD50 Oral (Rat): > 5.000 mg/kg Method: Expert judgement
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 2.000 mg/kg Method: Expert judgement

###### **Alcohols, C12-14. ethoxylated (CAS: 68439-50-9):**

Acute oral toxicity	:	LD50 Oral (Rat): 2.000 mg/kg
---------------------	---	------------------------------

# SAFETY DATA SHEET

## Korsolex basic

### **but-2-yne-1,4-diol** (CAS: 110-65-6):

Acute inhalation toxicity : LC50 (Rat): 0,69 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

### **Skin corrosion/irritation**

#### **Components:**

#### **Glutaral** (CAS: 111-30-8):

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Corrosive

#### **Formaldehyde** (CAS: 50-00-0):

Result: Causes burns.

#### **(ethylenedioxy)dimethanol** (CAS: 3586-55-8):

Result: Skin irritation

#### **Tridecanol, branched, ethoxylated** (CAS: 69011-36-5):

Species: Rabbit  
Result: No skin irritation

#### **Alcohols, C12-14. ethoxylated** (CAS: 68439-50-9):

Result: Repeated exposure may cause skin dryness or cracking.

### **but-2-yne-1,4-diol** (CAS: 110-65-6):

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Corrosive after 3 minutes or less of exposure

### **Serious eye damage/eye irritation**

#### **Components:**

#### **(ethylenedioxy)dimethanol** (CAS: 3586-55-8):

Result: Risk of serious damage to eyes.

#### **Tridecanol, branched, ethoxylated** (CAS: 69011-36-5):

Species: Rabbit  
Method: OECD Test Guideline 437  
Result: Risk of serious damage to eyes.

#### **Alcohols, C12-14. ethoxylated** (CAS: 68439-50-9):

Result: Irreversible effects on the eye

### **but-2-yne-1,4-diol** (CAS: 110-65-6):

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: Risk of serious damage to eyes.

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks: May cause sensitisation by inhalation and skin contact.

#### **Components:**

#### **Glutaral** (CAS: 111-30-8):

Species: Guinea pig

# SAFETY DATA SHEET

## Korsolex basic

Result: The product is a skin sensitiser, sub-category 1A.

Result: May cause sensitisation by inhalation.

**Formaldehyde** (CAS: 50-00-0):

Result: May cause sensitisation by skin contact.

**(ethylenedioxy)dimethanol** (CAS: 3586-55-8):

Result: May cause sensitisation by skin contact.

**Tridecanol, branched, ethoxylated** (CAS: 69011-36-5):

Test Type: Maximisation Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

**but-2-yne-1,4-diol** (CAS: 110-65-6):

Result: May cause sensitisation by skin contact.

### **Germ cell mutagenicity**

No data available

### **Carcinogenicity**

#### **Components:**

**Formaldehyde** (CAS: 50-00-0):

Carcinogenicity - Assessment : May cause cancer by inhalation.

### **Reproductive toxicity**

No data available

### **STOT - single exposure**

#### **Components:**

**Glutaral** (CAS: 111-30-8):

Assessment: May cause respiratory irritation.

### **STOT - repeated exposure**

#### **Components:**

**but-2-yne-1,4-diol** (CAS: 110-65-6):

Assessment: May cause damage to organs through prolonged or repeated exposure.

### **Repeated dose toxicity**

No data available

### **Aspiration toxicity**

No data available

### **Experience with human exposure**

No data available

### **Toxicology, Metabolism, Distribution**

No data available

### **Neurological effects**

No data available

**Korsolex basic****12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Glutaral (CAS: 111-30-8):**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,8 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,1 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 ( Desmodesmus subspicatus (green algae)): 0,6 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201
- NOEC ( Desmodesmus subspicatus (green algae)): 0,025 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to fish (Chronic toxicity) : NOEC: 1,6 mg/l  
Exposure time: 97 d  
Species: Oncorhynchus mykiss (rainbow trout)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 5 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211
- M-Factor (Chronic aquatic toxicity) : 1

**(ethylenedioxy)dimethanol (CAS: 3586-55-8):**

- Toxicity to fish : LC50 (Fish): 71 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 28 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 ( Pseudokirchneriella subcapitata (green algae)): 4,62 mg/l  
Exposure time: 72 h

**Tridecanol, branched, ethoxylated (CAS: 69011-36-5):**

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 1 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 ( Desmodesmus subspicatus (green algae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201



# SAFETY DATA SHEET

## Korsolex basic

Toxicity to microorganisms : IC50 (*Pseudomonas putida*): > 1.000 mg/l  
Exposure time: 16 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 1 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

### **Alcohols, C12-14. ethoxylated** (CAS: 68439-50-9):

Toxicity to fish : LC50 (Fish): > 1 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 1 mg/l  
Exposure time: 48 h

Toxicity to algae : IC50 (*Scenedesmus capricornutum* (fresh water algae)): > 1 mg/l  
Exposure time: 72 h

NOEC (*Scenedesmus capricornutum* (fresh water algae)): 0,14 mg/l

M-Factor (Acute aquatic toxicity) : 1

### **but-2-yne-1,4-diol** (CAS: 110-65-6):

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 49,3 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 26,8 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 1.058 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 15 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)  
Method: OECD Test Guideline 211

### **Persistence and degradability**

#### **Product:**

Biodegradability : Result: Biodegradable

#### **Components:**

##### **Glutaral** (CAS: 111-30-8):

Biodegradability : Remarks: Readily biodegradable, according to appropriate OECD test.

Biochemical Oxygen Demand (BOD) : Biochemical oxygen demand  
235 mg/g  
Incubation time: 5 d

Chemical Oxygen Demand (COD) : 1.385 mg/g

### **Bioaccumulative potential**

No data available

# SAFETY DATA SHEET

## Korsolex basic

### Mobility in soil

No data available

### Other adverse effects

No data available

---

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.

Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty remaining contents.  
Store containers and offer for recycling of material when in accordance with the local regulations.

---

## 14. TRANSPORT INFORMATION

### ADR

UN number : UN 3265  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(glutaral)  
Class : 8  
Packing group : II  
Labels : 8  
Hazard Identification Number : 80  
Tunnel restriction code : (E)

### UNRTDG

UN number : UN 3265  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(glutaral)  
Class : 8  
Packing group : II  
Labels : 8

### IATA-DGR

UN/ID No. : UN 3265  
Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.  
(glutaral)  
Class : 8  
Packing group : II  
Labels : Class 8 - Corrosive  
Packing instruction (cargo aircraft) : 855  
Packing instruction (passenger aircraft) : 851

### IMDG-Code

UN number : UN 3265  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(glutaral)  
Class : 8  
Packing group : II  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

# SAFETY DATA SHEET

## Korsolex basic

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Regulations

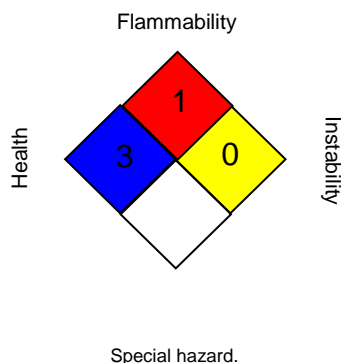
## 16. OTHER INFORMATION

### Safety datasheet sections which have been updated:

14. Transport information

### Further information

#### NFPA:



#### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level;

# SAFETY DATA SHEET

## Korsolex basic

NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

---

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

TC / EN