

SAFETY DATA SHEET

Korsolex basic

Version 4.7 Revision Date: 07.09.2020 SDS Number: R11820 Date of last issue: 04.05.2020
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 (Germany)
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
Serious eye damage/eye irritation : Category 1
Respiratory sensitisation : Category 1
Skin sensitisation : Category 1
Germ cell mutagenicity : Sub-category 1B
Carcinogenicity : Category 2
Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

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- 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	>= 10 - < 20
Formaldehyde	50-00-0	>= 5 - < 10
Tridecanol, branched, ethoxylated	69011-36-5	>= 3 - < 10
Alcohols, C12-14. ethoxylated	68439-50-9	>= 3 - < 10
but-2-yne-1,4-diol	110-65-6	>= 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.

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- 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 (CO₂)
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 protection

In 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 : 4,2 (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

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Density	:	1,09 g/cm ³ (20 °C)
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: 1,47 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5.000 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.
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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
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but-2-yne-1,4-diol (CAS: 110-65-6):

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

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.

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

Species : Rabbit
Result : No skin irritation

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:

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 : Risk of serious damage to eyes.

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

Result : May cause sensitisation by inhalation.

Formaldehyde (CAS: 50-00-0):

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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/aquatic plants : EC50 (Desmodemus subspicatus (green algae)): 0,6 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
- NOEC (Desmodemus 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

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/aquatic plants : EC50 (Desmodemus subspicatus (green algae)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- 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

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- 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/aquatic plants : IC50 (Scenedesmus capricornutum (fresh water algae)): > 1 mg/l
Exposure time: 72 h
- NOEC (Scenedesmus capricornutum (fresh water algae)): 0,14 mg/l

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/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 1.058 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
- NOEC (Desmodesmus subspicatus (green algae)): 125 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
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 : Remarks: The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Components:

Glutaral (CAS: 111-30-8):

- Biodegradability : Method: OECD Test Guideline 301A
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

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

- Biodegradability : Biodegradation: 91 %
Exposure time: 19 d

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Method: OECD Test Guideline 301E

Remarks: Readily biodegradable, according to appropriate OECD test.

Bioaccumulative potential

No data available

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 : 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

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EmS Code : F-A, S-B
Marine pollutant : no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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

Labelling

Symbol(s) : T

Risk phrase(s) : R45 May cause cancer.
R20/21/22 Also harmful by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R68 Possible risk of irreversible effects.
R42/43 May cause sensitisation by inhalation and skin contact.

Safety phrase(s) : S53 Avoid exposure - obtain special instructions before use.
S23 Do not breathe vapour.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S35 This material and its container must be disposed of in a safe way.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazardous components which must be listed on the label : Glutaral (CAS: 111-30-8)
Formaldehyde (CAS: 50-00-0)

Special labelling of certain mixtures : Restricted to professional users.

International Regulations

16. OTHER INFORMATION

Safety datasheet sections which have been updated:

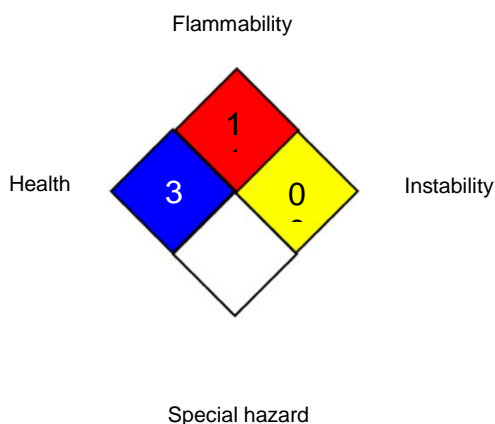
13. Disposal considerations

Further information

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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; 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; 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