

SAFETY DATA SHEET

Kohrsolin

Version 0.0 Revision Date: 29.09.2015 MSDS Number: R11230 Date of last issue: 02.04.2015
Date of first issue: 02.04.2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Kohrsolin

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

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 : Category 2
Serious eye damage/eye irritation : Category 1
Respiratory sensitisation : Category 1
Skin sensitisation (Dermal) : Category 1
Specific target organ toxicity -
single exposure (Inhalation) : Category 3
Carcinogenicity : Category 1B
Germ cell mutagenicity : Category 2
Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms : 

Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled
H315 Causes skin irritation.
H318 Causes serious eye damage.

Kohrsolin

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : P201 Obtain special instructions before use.
Prevention:
 P261 Avoid breathing vapours.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P284 In case of inadequate ventilation wear respiratory protection.
Response:
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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 or doctor/ physician.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
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

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
(ethylenedioxy)dimethanol	3586-55-8	>= 10 - < 20
Glutaral	111-30-8	>= 10 - < 20
urea	57-13-6	>= 1 - < 10
Formaldehyde	50-00-0	>= 1 - < 10
ethanediol	ethylene glycol	>= 1 - < 10
Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt	111798-26-6	>= 1 - < 10
Alcohols, C12-14. ethoxylated	68439-50-9	>= 1 - < 10

4. FIRST AID MEASURES

General advice : Get medical attention immediately.

If inhaled : Remove to fresh air immediately. Get medical attention immediately.

In case of skin contact : Take off all contaminated clothing immediately.
Wash off with soap and water.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

If swallowed : Rinse mouth.
Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed : None known.

SAFETY DATA SHEET

Kohrsolin

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.
- Unsuitable extinguishing media : none
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : Standard procedure for chemical fires.
- 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 : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

- Advice on safe handling : Keep container closed when not in use.

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	C	0,3 ppm	ACGIH
ethanediol	ethylene glycol	C (Aerosol only)	100 mg/m3	ACGIH

Occupational exposure limits of decomposition products

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

Personal protective equipment

- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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

- Eye protection : Tightly fitting safety goggles

- Skin and body protection : Lightweight protective clothing

- Hygiene measures : Ensure adequate ventilation, especially in confined areas. Handle in accordance with good industrial hygiene and safety practice. Keep away from food and drink.

Kohrsolin**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Colour	: light yellow
Odour	: stinging
pH	: 5, (20 °C)
Melting point/range	: not determined
Boiling point/boiling range	: 100 °C
Flash point	: Not applicable
Density	: 1,1 g/cm ³ (20 °C)
Solubility(ies) Water solubility	: completely miscible

10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: None reasonably foreseeable.
Conditions to avoid	: Heat Strong sunlight for prolonged periods.
Hazardous decomposition products	: This product may release the following:

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute inhalation toxicity	: Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
---------------------------	---

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

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

Glutaral (CAS: 111-30-8):

Acute oral toxicity	: LD50 Oral (Rat): 200 mg/kg
Acute inhalation toxicity	: LC50 (Rat, male): 0,35 mg/l Exposure time: 4 h
Acute dermal toxicity	: LD50 Dermal (Rabbit): 1.749 mg/kg

urea (CAS: 57-13-6):

Acute oral toxicity	: LD50 (Rat): 8.471 mg/kg
Acute dermal toxicity	: LD50 (Rat): 8.200 mg/kg

SAFETY DATA SHEET

Kohrsolin

ethanediol (CAS: 107-21-1):

Acute oral toxicity : LD50 Oral (Rat): > 300 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 9.530 mg/kg

Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt (CAS: 111798-26-6):

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

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

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

Skin corrosion/irritation**Product:**

Result: irritating

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

Result: Skin irritation

Glutaral (CAS: 111-30-8):

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

urea (CAS: 57-13-6):

Species: Rabbit

Result: No skin irritation

ethanediol (CAS: 107-21-1):

Result: No skin irritation

Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt (CAS: 111798-26-6):

Assessment: Irritating to skin.

Result: Skin irritation

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

Result: Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation**Product:**

Result: Risk of serious damage to eyes.

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

Result: Risk of serious damage to eyes.

Glutaral (CAS: 111-30-8):

Species: Rabbit

Method: Draize Test

Result: Irreversible effects on the eye

urea (CAS: 57-13-6):

Species: Rabbit

Result: No eye irritation

Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt (CAS: 111798-26-6):

Assessment: Irritating to eyes.

SAFETY DATA SHEET

Kohrsolin

Result: Eye irritation

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

Result: Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Remarks: May cause sensitisation by inhalation and skin contact.

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Aspiration toxicity

Components:

Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt (CAS: 111798-26-6):

May be harmful if swallowed and enters airways.

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 21 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Components:

(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

SAFETY DATA SHEET

Kohrsolin

Exposure time: 72 h

Glutaral (CAS: 111-30-8):

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 10,8 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,69 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 2,64 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,24 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1

urea (CAS: 57-13-6):

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 6.810 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10.000 mg/l
Exposure time: 24 h

ethanediol (CAS: 107-21-1):

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 10.000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 41.100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Scenedesmus capricornutum (fresh water algae)): > 10.000 mg/l
Exposure time: 72 h

Poly(oxy-1,2-ethanediyl), .alpha.-(2-ethylhexyl)-.omega.-hydroxy-, phosphate, sodium salt (CAS: 111798-26-6):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 75 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 267 mg/l
Exposure time: 48 h

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 (Chronic aquatic toxicity) : 1

Kohrsolin

ty)

Persistence and degradability**Components:****Glutaral (CAS: 111-30-8):**

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

Chemical Oxygen Demand (COD) : 1.385 mg/g

Bioaccumulative potential**Components:****urea (CAS: 57-13-6):**

Partition coefficient: n-octanol/water : log Pow: -1,59

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.

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

14. TRANSPORT INFORMATION**ADR**

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION**Full text of other abbreviations**

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -

Kohrsolin

Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TDG - Transportation of Dangerous Goods; 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; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Safety datasheet sections which have been updated:

2. Hazards identification

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