Korsolex-Endo-Disinfectant

Version	Revision Date:	SDS Number:	Date of last issue: 26.10.2018
2.3	09.09.2021	R11819	Date of first issue: 07.02.2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Korsolex-Endo-Disinfectant

Manufacturer or supplier's details

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

Supplier : PAUL HARTMANN B.V.
Kerkenbos 11-03d
NL-6500 AA Nijmegen
Netherlands
Tel.: +31 (0)24 711 2689

Responsible Department : eddy.verharen@hartmann.info

Emergency telephone number : Nationaal Vergiftigingen Informatie Centrum (NVIC)
Rijksinstituut voor Volksgeszondheid en Milieu
Postbus 1, NL-3720 BA Bilthoven
Netherlands
24h-Phone +31 30 - 274 88 88

Recommended use of the chemical and restrictions on use

Recommended use : In-door use
Application in a closed system
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

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion/irritation : Sub-category 1A

Serious eye damage/eye irritation : Category 1

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
H226 Flammable liquid and vapour.
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.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.
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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

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

Components

Chemical name	CAS-No.	Concentration (% w/w)
Glutaral	111-30-8	>= 20 - < 25
Ethanol	64-17-5	>= 10 - < 20
2-phosphonobutane-1,2,4-tricarboxylic acid	37971-36-1	>= 1 - < 10

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 immediately with plenty of 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	:	Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Notes to physician	:	Keep under medical supervision for at least 48 hours. For specialist advice physicians should contact the Poisons Information Service.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Cool closed containers exposed to fire with water spray.
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 - small spillage Wipe up with absorbent material (e.g. cloth, fleece). Clean-up methods - large spillage Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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
Glutaral	111-30-8	C	0,05 ppm	ACGIH
Ethanol	64-17-5	STEL	1.000 ppm	ACGIH

Personal protective equipment

Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with a vapour filter (EN 141)
Hand protection		
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	:	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. Ensure adequate ventilation, especially in confined areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light yellow
Odour	:	characteristic
pH	:	2,5 (20 °C)
Boiling point/boiling range	:	not determined
Flash point	:	47 °C
		Method: DIN 51755 Part 1
Density	:	1,04 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	completely miscible

10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	The product is chemically stable.

Possibility of hazardous reactions	:	None reasonably foreseeable.
Conditions to avoid	:	Heat Strong sunlight for prolonged periods.
Incompatible materials	:	Bases
Hazardous decomposition products	:	No decomposition if used as directed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 770 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 1,4 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 oral toxicity	:	LD50 (Rat): 154 mg/kg Method: OECD Test Guideline 401
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.
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 2.000 mg/kg Method: OECD Test Guideline 402

Ethanol (CAS: 64-17-5):

Acute oral toxicity	:	LD50 Oral (Rat): 10.470 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): 51 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403

2-phosphonobutane-1,2,4-tricarboxylic acid (CAS: 37971-36-1):

Acute oral toxicity	:	LD50 (Rat): > 6.500 mg/kg
Acute dermal toxicity	:	LD50 (Rat): > 4.000 mg/kg

Skin corrosion/irritation

Components:

Glutaral (CAS: 111-30-8):

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

Ethanol (CAS: 64-17-5):

Species	:	human skin
Result	:	Mild skin irritation
Remarks	:	Based on available data, the classification criteria are not met.

2-phosphonobutane-1,2,4-tricarboxylic acid (CAS: 37971-36-1):

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Components:

Ethanol (CAS: 64-17-5):

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irritating to eyes.

2-phosphonobutane-1,2,4-tricarboxylic acid (CAS: 37971-36-1):

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Mild eye irritation

Respiratory or skin sensitisation

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.

Ethanol (CAS: 64-17-5):

Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.

2-phosphonobutane-1,2,4-tricarboxylic acid (CAS: 37971-36-1):

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

Components:

Glutaral (CAS: 111-30-8):

Assessment : May cause respiratory irritation.

STOT - repeated exposure

No data available

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 41 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to microorganisms : IC50 (Pseudomonas putida): 19 mg/l
Exposure time: 72 h
Method: DIN 38 412 Part 8

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 (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

Ethanol (CAS: 64-17-5):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 11.200 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 9.268 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Chlorella vulgaris (Fresh water algae)): 9,6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

2-phosphonobutane-1,2,4-tricarboxylic acid (CAS: 37971-36-1):

Toxicity to fish	:	NOEC (Brachydanio rerio (zebrafish)): 1.042 mg/l Exposure time: 14 d Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1.071 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Scenedesmus capricornutum (fresh water algae)): > 1.081 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 104 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Persistence and degradability

Product:

Biodegradability	:	Method: OECD Test Guideline 301D Remarks: Readily biodegradable, according to appropriate OECD test.

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

Ethanol (CAS: 64-17-5):

Biodegradability	:	Result: Readily biodegradable.

Bioaccumulative potential

Components:

Ethanol (CAS: 64-17-5):

Partition coefficient: n-octanol/water	:	log Pow: -0,35

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. The product should not be allowed to enter drains, water courses or the soil.
Contaminated packaging	:	Empty remaining contents. Clean container with water. Offer rinsed packaging material to local recycling facilities.

14. TRANSPORT INFORMATION

ADR

UN number	:	UN 2920
Proper shipping name	:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (glutaral, ethanol)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)
Hazard Identification Number	:	83
Tunnel restriction code	:	(D/E)

UNRTDG

UN number	:	UN 2920
Proper shipping name	:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (glutaral, ethanol)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)

IATA-DGR

UN/ID No.	:	UN 2920

Proper shipping name	:	Corrosive liquid, flammable, n.o.s. (glutaral, ethanol)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	Corrosive, Flammable Liquids
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 2920
Proper shipping name	:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (glutaral, ethanol)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)
EmS Code	:	F-E, S-C
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

Other international regulations

International Regulations

The components of this product are reported in the following inventories:

TSCA	:	All substances listed as active on the TSCA inventory

16. OTHER INFORMATION

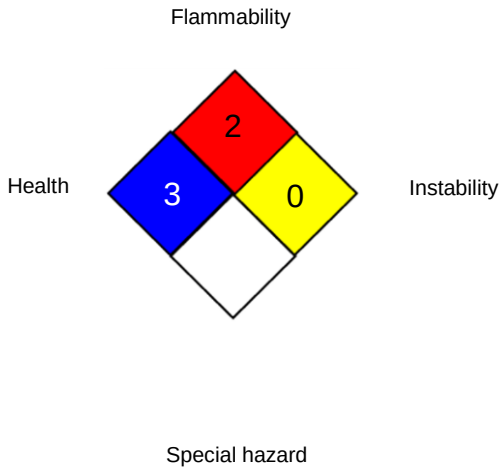
Safety datasheet sections which have been updated:

15. Regulatory information

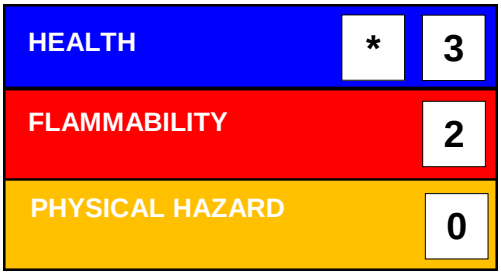
Further information

Korsolex-Endo-Disinfectant

NFPA:



HMIS® IV:



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 / STEL	:	Short-term exposure limit
ACGIH / C	:	Ceiling limit

AIIC - Australian Inventory of Industrial Chemicals; 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

Korsolex-Endo-Disinfectant

TC / EN