

SAFETY DATA SHEET

Korsolex plus

Version 1.4 Revision Date: 30.11.2018 SDS Number: R11082 Date of last issue: 26.10.2018
Date of first issue: 29.04.2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Korsolex plus

Product code : R11082

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
medical device
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

Skin corrosion : Category 1A

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P273 Avoid release to the environment.

Korsolex plus**Prevention:**

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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.

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/doctor.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant. 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)
Didecyltrimethylammonium chloride	7173-51-5	>= 10 - < 20
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	>= 1 - < 10
Propan-2-ol	67-63-0	>= 1 - < 10
ethylene glycol	107-21-1	>= 1 - < 10
Alcohols, C12-14. ethoxylated	68439-50-9	>= 1 - < 10
Tridecanol, branched, ethoxylated	69011-36-5	>= 1 - < 10

4. FIRST AID MEASURES

General advice : Call a physician immediately.

If inhaled : If fumes from reactions are inhaled, move to fresh air 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.

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

Notes to physician : 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.

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- 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 : Use personal protective equipment.
In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
- 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 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

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.

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 : Lightweight protective clothing
- 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.

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Keep away from food and drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	greenish-blue
Odour	:	characteristic
pH	:	9,8 (20 °C)
Melting point/range	:	not determined
Boiling point/boiling range	:	not determined
Flash point	:	44 °C
		Method: DIN 51755 Part 1
Flammability (solid, gas)	:	not auto-flammable
Vapour pressure	:	No data available
Density	:	1,01 g/cm ³ (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	:	aldehydes Anionic surfactants

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

Didecyldimethylammonium chloride (CAS: 7173-51-5):

Acute oral toxicity : LD50 Oral (Rat): 238 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rabbit): 3.342 mg/kg

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):

Acute oral toxicity : LD50 Oral (Rat): 261 mg/kg
Method: OECD Test Guideline 401

Propan-2-ol (CAS: 67-63-0):

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

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Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg

ethylene glycol (CAS: 107-21-1):

Acute dermal toxicity : LD50 Dermal (Rabbit): 9.250 mg/kg

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

Acute oral toxicity : LD50 Oral (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

Skin corrosion/irritation**Components:****Didecyldimethylammonium chloride** (CAS: 7173-51-5):

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

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):

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

Propan-2-ol (CAS: 67-63-0):

Species: Rabbit
Result: No skin irritation

ethylene glycol (CAS: 107-21-1):

Result: No skin irritation

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

Result: Repeated exposure may cause skin dryness or cracking.

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

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation**Components:****Propan-2-ol** (CAS: 67-63-0):

Species: Rabbit
Result: Eye irritation

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

Result: Irreversible effects on the eye

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

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

Korsolex plus**Respiratory or skin sensitisation****Product:**

Result: Does not cause skin sensitisation.

Result: Does not cause respiratory sensitisation.

Components:**N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):**

Test Type: Buehler Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

Propan-2-ol (CAS: 67-63-0):

Test Type: Buehler Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

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

Test Type: Maximisation Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Components:****N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):**

Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Propan-2-ol (CAS: 67-63-0):

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure**Components:****N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):**

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

ethylene glycol (CAS: 107-21-1):

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

Repeated dose toxicity**Components:****N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):**

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Species: Rat
NOAEL: 8 mg/kg
Application Route: Oral
Exposure time: 90 d

Species: Dog
NOAEL: 18 mg/kg
Application Route: Oral
Exposure time: 90 d

Species: Rat
NOAEL: 14 mg/kg
Application Route: Dermal
Exposure time: 90 d

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 microorganisms : IC50 (Bacteria): 175 mg/l
Method: OECD Test Guideline 209

Components:

Didecyldimethylammonium chloride (CAS: 7173-51-5):

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0,19 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,062 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,026 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 0,032 mg/l
Exposure time: 34 d
Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,014 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

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M-Factor (Chronic aquatic toxicity) : 1

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS: 2372-82-9):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,68 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)): 0,073 mg/l
Exposure time: 48 h
Test Type: Immobilization

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,054 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : (Bacteria): 16 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,024 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

Propan-2-ol (CAS: 67-63-0):

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Scenedesmus capricornutum (fresh water algae)): > 100 mg/l
Exposure time: 72 h

ethylene glycol (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

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

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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 : EC50 (Desmodesmus 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)

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:

Didecyldimethylammonium chloride (CAS: 7173-51-5):

Biodegradability : Method: Modified Sturm Test
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.
The product should not be allowed to enter drains, water courses or the soil.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty remaining contents.
Clean container with water.

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Offer rinsed packaging material to local recycling facilities.

14. TRANSPORT INFORMATION**ADR**

UN number : UN 2924
 Proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (propan-2-ol, didecyldimethylammonium chloride)
 Class : 3
 Subsidiary risk : 8
 Packing group : III
 Labels : 3 (8)
 Hazard Identification Number : 38
 Tunnel restriction code : (D/E)
 Environmentally hazardous : yes

UNRTDG

UN number : UN 2924
 Proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (propan-2-ol, didecyldimethylammonium chloride)
 Class : 3
 Subsidiary risk : 8
 Packing group : III
 Labels : 3 (8)

IATA-DGR

UN/ID No. : UN 2924
 Proper shipping name : Flammable liquid, corrosive, n.o.s.
 (propan-2-ol, didecyldimethylammonium chloride)
 Class : 3
 Subsidiary risk : 8
 Packing group : III
 Labels : Class 3 - Flammable Liquid, Class 8 - Corrosive
 Packing instruction (cargo aircraft) : 365
 Packing instruction (passenger aircraft) : 354

IMDG-Code

UN number : UN 2924
 Proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (propan-2-ol, didecyldimethylammonium chloride)
 Class : 3
 Subsidiary risk : 8
 Packing group : III
 Labels : 3 (8)
 EmS Code : F-E, S-C
 Marine pollutant : yes

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**

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International Regulations

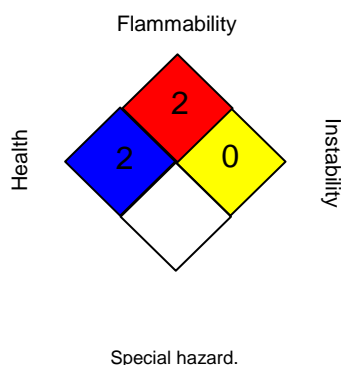
16. OTHER INFORMATION

Safety datasheet sections which have been updated:

3. Composition/information on ingredients

Further information

NFPA:



HMIS® IV:

HEALTH	1	2
FLAMMABILITY	2	
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

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; 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, pro-

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cessing, 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