### SAFETY DATA SHEET

# Korsolex extra

Version Revision Date: SDS Number: Date of last issue: 23.01.2019
3.7 21.02.2019 R11849 Date of first issue: 01.02.2017

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Korsolex extra

Product code : R11849

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** 

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Serious eye damage : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic haz-

ard

Category 1

**GHS** label elements

Hazard pictograms :











Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 + H332 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H318 Causes serious 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.

H350 May cause cancer.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

#### Prevention:

P201 Obtain special instructions before use.

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ eye protection/ face protection.

P284 Wear respiratory protection.

#### Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

## Components

Chemical name	CAS-No.	Concentration (% w/w)
Glutaral	111-30-8	>= 1 - < 10
Formaldehyde	50-00-0	>= 1 - < 10
(ethylenedioxy)dimethanol	3586-55-8	>= 1 - < 10
Propan-2-ol	67-63-0	>= 1 - < 10
Octan-1-ol, ethoxylated	27252-75-1	>= 1 - < 10
Tridecanol, branched, ethoxylated	69011-36-5	>= 1 - < 10
[[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic	Not Assigned	>= 1 - < 10
acid		
Didecyldimethylammonium chloride	7173-51-5	>= 1 - < 10
Benzyl-C12-18-alkyldimethylammonium chlorides	68391-01-5	>= 1 - < 10

### 4. FIRST AID MEASURES

General advice : Call a physician immediately.

If inhaled : If breathed in, move person into fresh air.

In case of skin contact : Take off contaminated clothing and shoes immediately.

Wash off immediately with soap and 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 : None known.

effects, both acute and delayed

Notes to physician : Keep under medical supervision for at least 48 hours.

For specialist advice physicians should contact the Poisons Infor-

mation Service.

### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : In case of fire, use water/water spray/water jet/carbon diox-

ide/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 : 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 pro-

cedures

Ensure adequate ventilation. Wear respiratory protection.

Environmental precautions : Should not be released into the environment.

Methods and materials for con-

tainment 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.

Provide sufficient air exchange and/or exhaust in work rooms.

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 ex- posure)	Control parameters / Permissible con- centration	Basis
Formaldehyde	50-00-0	TWA	0,1 ppm	ACGIH
		STEL	0,3 ppm	ACGIH
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STFI	400 ppm	ACGIH

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type	Control parameters	Basis
		(Form of ex-	/ Permissible con-	

		posure)	centration	
formaldehyde	50-00-0	TWA	0,1 ppm	ACGIH
		STEL	0,3 ppm	ACGIH

## **Biological occupational exposure limits**

Components	CAS-No.	Control pa-	Biological	Sampling	Permissible	Basis
		rameters	specimen	time	concentration	
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

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 : Combined inorganic gas/vapour and organic vapour type

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 : Lightweight protective clothing

Protective measures : Ensure that eye flushing systems and safety showers are located

close to the working place.

Hygiene measures : Keep away from food and drink.

Handle in accordance with good industrial hygiene and safety prac-

tice.

Avoid contact with the skin and the eyes.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : blue

Odour : characteristic

pH : 4 (20 °C)

Melting point/range : not determined

Boiling point/boiling range : 100 °C

Flash point : 46 °C

Method: DIN 51755 Part 1

Flammability (solid, gas) : not auto-flammable

Vapour pressure : No data available

Density : 1,04 g/cm3 (20 °C)

Solubility(ies)

Water solubility : soluble

### 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 : Amines

Anionic surfactants

Hazardous decomposition prod-

ucts

Formaldehyde (CAS: 50-00-0)

### 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

## 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

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

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

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

Octan-1-ol, ethoxylated (CAS: 27252-75-1):

Acute oral toxicity : LD50 Oral: > 2.000 mg/kg

Method: Calculation method

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

[[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:
Acute oral toxicity : LD50 Oral (Rat): 250 mg/kg

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

Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Acute oral toxicity : LD50 (Rat): 344 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 3.340 mg/kg

### Skin corrosion/irritation

### **Product:**

Result: Skin irritation

Result: Irritating to mucous membranes

### **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

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

Species: Rabbit

Result: No skin irritation

## Octan-1-ol, ethoxylated (CAS: 27252-75-1):

Result: No skin irritation

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

Species: Rabbit

Result: No skin irritation

## [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

## 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

### Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Species: Rabbit

Result: Corrosive after 3 minutes to 1 hour of exposure

# 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.

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

Species: Rabbit Result: Eye irritation

#### Octan-1-ol, ethoxylated (CAS: 27252-75-1):

Result: Irritating to eyes.

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

Species: Rabbit

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

### [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:

Species: Rabbit

Assessment: Risk of serious damage to eyes.

Method: OECD Test Guideline 405

### Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Species: Rabbit Result: Corrosive

#### 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):

Result: May cause sensitisation by skin contact.

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

Result: May cause sensitisation by skin contact.

### 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.

## [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:

Species: Guinea pig

Method: OECD Test Guideline 406 Result: Does not cause skin sensitisation.

### Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Test Type: Maximisation Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

## Germ cell mutagenicity

## **Components:**

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

Genotoxicity in vitro : Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

## 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

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**

## **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 : EC50 (Daphnia magna (Water flea)): 2,1 mg/l

aquatic invertebrates 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 toxici: :

ty)

(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

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

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 : NOEC: > 1 mg/l

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aquatic invertebrates (Chronic Exposure time: 21 d

toxicity) Species: Daphnia magna (Water flea)

[[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:

Toxicity to fish : LC50 (Fish): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 50 mg/l

Exposure time: 48 h

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

M-Factor (Chronic aquatic toxici: :

ty)

Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0,28 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0,016 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 ( Pseudokirchneriella subcapitata (microalgae)): 0,049 mg/l

Exposure time: 72 h

Test Type: Cell multiplication inhibition test 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: Leuciscus idus (Golden orfe) Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic

toxicity)

NOEC: 0,0042 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxici: 1

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ty)

#### Persistence and degradability

**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

[[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid:

Biodegradability : Biodegradation: > 70 %

Method: OECD Test Guideline 302B

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

Biodegradability : Method: Modified Sturm Test

Remarks: Readily biodegradable, according to appropriate OECD

test.

Benzyl-C12-18-alkyldimethylammonium chlorides (CAS: 68391-01-5):

Biodegradability : Remarks: According to the results of tests of biodegradability this

product is considered as being readily biodegradable.

**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.

Contaminated packaging : Empty remaining contents.

Clean container with water.

Store containers and offer for recycling of material when in accord-

ance with the local regulations.

## 14. TRANSPORT INFORMATION

ADR

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(propan-2-ol, glutaral)

Class : 3 Packing group : III Labels : 3

Hazard Identification Number : 30
Tunnel restriction code : (D/E)
Environmentally hazardous : yes

**UNRTDG** 

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(propan-2-ol, glutaral)

Class : 3
Packing group : III
Labels : 3

**IATA-DGR** 

UN/ID No. : UN 1993

Proper shipping name : Flammable liquid, n.o.s.

(propan-2-ol, glutaral)

Class : 3 Packing group : III

Labels : Class 3 - Flammable Liquid

Packing instruction (cargo air- : 366

craft)

Packing instruction (passenger : 355

aircraft)

**IMDG-Code** 

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(propan-2-ol, glutaral)

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
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

**International Regulations** 

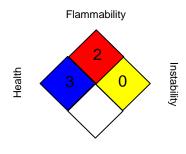
#### 16. OTHER INFORMATION

## Safety datasheet sections which have been updated:

3. Composition/information on ingredients

#### **Further information**

#### NFPA:



Special hazard.

### HMIS® IV:

HEALTH	*	3
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

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

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; 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.

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