

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 3.3 Revision Date 17.03.2010

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Product name : Chlorhexidine

Product Number : 24798

Brand : Fluka

Company : Sigma-Aldrich (Shanghai) Trading Co., Ltd  
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**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture**

According to Regulation (EC) No1272/2008

Skin irritation (Category 2)

Eye irritation (Category 2)

Respiratory sensitization (Category 1)

Specific target organ toxicity - single exposure (Category 3)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

According to European Directive 67/548/EEC as amended.

Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause sensitization by skin contact.

**Label elements**

Pictogram



Signal word

Danger

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335

May cause respiratory irritation.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

P273

Avoid release to the environment.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P342 + P311

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P501

Dispose of contents/container to an approved waste disposal plant.

Hazard symbol(s)	
Xi	Irritant
N	Dangerous for the environment
R-phrases(s)	
R36/37/38	Irritating to eyes, respiratory system and skin.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R43	May cause sensitization by skin contact.
S-phrases(s)	
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37	Wear suitable protective clothing and gloves.
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

#### Other hazards

Photosensitizer.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	: 1,1'-Hexamethylenebis[5-(4-chlorophenyl)biguanide]
Formula	: C <sub>22</sub> H <sub>30</sub> Cl <sub>2</sub> N <sub>10</sub>
Molecular Weight	: 505,45 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
<b>Chlorhexidine</b>				
55-56-1	200-238-7	-	Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H315, H319, H334, H335, H410 Xi, N, R36/37/38 - R50/53 - R43	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. Sensitive to carbon dioxide

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	solid
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### Safety data

pH	no data available
Melting point	134 - 136 °C 134 - 136 °C - lit.
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available

Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - mouse - 2.515 mg/kg

Remarks: Lungs, Thorax, or Respiration: Acute pulmonary edema.

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

May cause sensitization by inhalation.

### Germ cell mutagenicity

no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

Reproductive toxicity - mouse - Oral

Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ).

### Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

### Specific target organ toxicity - repeated exposure

no data available

### Aspiration hazard

no data available

### Potential health effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### **Additional Information**

RTECS: DU1925000

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## **12. ECOLOGICAL INFORMATION**

### **Toxicity**

Toxicity to fish LC50 - Danio rerio (zebra fish) - 1,4 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia - 0,063 mg/l - 48 h

### **Persistence and degradability**

Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable.

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **PBT and vPvB assessment**

no data available

### **Other adverse effects**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Additional ecological information no data available

Biochemical Oxygen Demand (BOD) 0 mg/l

Chemical Oxygen Demand (COD) 110 mg/l

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## **13. DISPOSAL CONSIDERATIONS**

### **Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### **Contaminated packaging**

Dispose of as unused product.

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## **14. TRANSPORT INFORMATION**

### **ADR/RID**

UN-Number: 3077 Class: 9

Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Chlorhexidine)

### **IMDG**

UN-Number: 3077 Class: 9

Packing group: III

EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Chlorhexidine)

Marine pollutant: No

### **IATA**

UN-Number: 3077 Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Chlorhexidine)

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrases mentioned in Section 3

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.
Resp. Sens.	Respiratory sensitization
Skin Irrit.	Skin irritation
N	Dangerous for the environment
Xi	Irritant
R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Further information

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