

### 01. Identification of Product and Company

Product name: RENALIN® Cold Sterilant  
Article numbers: 78397-521 / 78397-741 / 78397-872  
Application: Disinfection liquid  
Company name: Minntech BV  
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The Netherlands  
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E-mail: [info@minntechbv.com](mailto:info@minntechbv.com)  
Home page: [www.minntech.com](http://www.minntech.com)  
Emergency Number: CHEMTREC +1-703-527-3887

### 02. Composition/Information on Ingredients

Component	EINECS	CAS	Amount w/w [%]	Symbol/ R-phrases
Hydrogen Peroxide	231-765-0	7722-84-1	20-24	C, R 22-41
Peracetic Acid	201-186-8	79-21-0	4-6	Xi, R 34
Acetic Acid	200-580-7	64-19-7	8-10	Xi, R 36/38

### 03. Hazards Identification

The product is an Oxidizer and Corrosive that can cause burns. Direct contact could cause irreversible damage to eyes and skin tissue. Irritating to the respiratory system.

### 04. First Aid Measures

#### General

If clothing is contaminated, remove clothing, and wash clothing before reusing.

#### Eyes and skin

Flush immediately with excess water for at least 15 minutes. If burn or irritation has occurred, seek medical attention.

#### Ingestion

Drink large amounts of water. Do not induce vomiting. Seek medical attention if necessary.

#### Inhalation

Move to fresh air and breathe deeply. Seek medical attention if necessary.

### 05. Fire Fighting Measures

#### Extinguishing Media

Water spray / Foam / CO<sub>2</sub> / dry chemicals

#### Extinguishing Media to Avoid

Direct water jet.

### Exposure Risks from Combustion Product / Gases

Danger of developing toxic Pyrolyse products.

#### Special Equipment for Fire-fighters

Protect the respiratory ways. Use visors and gloves.

#### Additional Measures

Cool risky containers with water spray. Damaged products and contaminated water shall be disposed according to local laws and requirements.

### 06. Accidental Release Measures

#### Personal Precautions

Put on eye protection, protective gloves, boots, clothing and a respirator if air contamination is above the permitted levels. Arrange sufficient ventilation of air. People should move away from any vapors in the contaminated area.

#### Environmental Precautions

In case of accidental spillage, contain the spill and neutralize it with sodium bicarbonate or sodium carbonate.

#### If allowed by local legislation:

Flush spill to the sewer. If mops, towels, paper towel or similar material is used, insure that these items are thoroughly rinsed with large amounts of water. Do not reuse the liquid material.

## 07. Handling and Storage

### Handling

Keep container closed by using a vented cap. Do not transfer product from original container and once the product has been removed, do not return to the original container. Exhaust required at point of use.

### Fire- and Explosion

Degradation of this product produces oxygen; keep away from heating/ignition sources. Do not smoke.

### Storage

Store in a cool dry area (below 24°C) away from heating sources. Heating will lead to pressure increase and danger of bursting the container. Floor needs a protective coating against acid.

### Combined Storage

Do not store with flammable materials, metals, oxidizing or caustic materials.

## 08. Exposure Controls/Personal Protection

### Technical Measures

Assure sufficient air exhaust and supply of fresh air.

### Exposure limits at work place

#### Component

##### Acetic Acid

MAK/TLV: 10ppm, MAK/TLV: 25 mg/m<sup>3</sup>,  
F=1=(DFG, EU)

##### Hydrogen Peroxide

MAK/TLV: 1ppm, MAK/TLV: 1,4 mg/m<sup>3</sup>,  
F=1=(DFG)

MAK = maximum work place concentration, TLV =  
Threshold Limit Value, F = Factor, Short Limit value.

### Respiratory protection

If air contamination is above the permitted levels, use a mask for acid vapors, Combination filter B-P2.

### Hand protection

Protective gloves. (e.g. nitrite, latex, neoprene)  
Refer to glove manufacturer specifications for compatibility.

### Eye protection

Safety glasses or goggles. A face shield should be worn when splashes are likely.

### Skin protection

Protective apron should be worn when splashes are likely. Rubber boots should be used for spill response.

### General Measures

Avoid contact with eyes and skin. Do not breathe gases / vapors / aerosols.

### Hygienic Measures

Do not eat, drink, or smoke. Immediately remove contaminated clothing. Wash hands before breaks and at end of shift. Preventive hand care by hand crème.

### Limitation and Monitoring of Environmental Emission

Not determined.

## 09. Physical and Chemical Properties

<b>Physical state:</b>	liquid
<b>Appearance:</b>	clear
<b>Odor:</b>	acid, pungent
<b>pH:</b>	0,8 ± 0,3
<b>Boiling point [°C]:</b>	Not determined
<b>Flashing point [°C]:</b>	Not determined
<b>Ignition conditions:</b>	Not determined
<b>Lower explosion limit:</b>	Not determined
<b>Upper explosion limit:</b>	Not determined
<b>Fire fortifying:</b>	Yes
<b>Vapor pressure at 50°C [kPA]:</b>	<110
<b>Vapor density [g/ml]:</b>	Not determined
<b>Specific gravity (H<sub>2</sub>O) [kg/l]:</b>	1,090 – 1,140
<b>Solubility in water (by weight):</b>	complete
<b>Ratio n-Octanol / Water:</b>	Not determined
<b>Viscosity:</b>	Not determined
<b>Relative vapour density relative to air:</b>	Not determined
<b>Evaporation rate:</b>	Not determined
<b>Freezing point [°C]:</b>	Not determined
<b>Melting point [°C]:</b>	Not determined
<b>Self-reactivity:</b>	Not a self reactive substance

## 10. Stability and Reactivity

### Materials to Avoid

Avoid heavy metals including iron, copper, copper alloys, brass and aluminium, salts, flammable organics, alkalis, caustics, chlorine and formaldehyde.

### Stability

Product is stable.

### Conditions to Avoid

Avoid direct sunlight, heat and hot storage (>24°C).

### Hazardous Decomposition

Oxygen & Heat. Do not mix with chlorinated products as this could liberate toxic corrosive chlorine gas.

### Hazardous Polymerisation

Will not occur

## 11. Toxicological Information

### Effects from Eye Contact

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, significantly impaired vision or potentially a complete loss of vision.

### Effects from Skin Contact

Corrosive (Skin Burns): Signs/symptoms may include turning the skin chalky white, swelling, itching, intense pain, blistering, and potential tissue destruction.

### Effects from Inhalation

Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

### Effects from Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

## 12. Environmental Information

This product has been tested and determined to be toxic to fish and aquatic invertebrates:

- Daphnia Magna / Water Flea: LC50 2.61 mg ai/L

- Rainbow Trout: LC50 6.68 mg ai/L
- Bluegill: LC50 4.25 mg ai/L

## 13. Disposal Considerations

### Product Disposal

Dispose of this product in accordance with all applicable European and Local regulations.

### Disposal of Bottle and Packaging

Bottles and packaging can be disposed according European and Local regulations. Bottles should be thoroughly rinsed before disposal.

## 14. Transportation Information

### 14.1 Classification according to ADR

**ADR class:** 5.1  
**Proper Shipping Name:** UN3149 Hydrogen Peroxide and Peracetic Acid Mixture, Stabilized 5.1 (8) II  
**UN number:** UN 3149  
**Factor, ADR 1.1.3.6:** 3  
**Transport Emergency Card:**  
**Labeling:** 5.1 & 8  
**LQ, ADR 3.4.6:** LQ10  
**Vapor pressure [kPa]:** <110, [50°C]

### 14.2 Classification according to IMDG

**IMDG-Code Number:** 5.1  
**Proper Shipping Name:** Hydrogen Peroxide and Peracetic Acid Mixture, Stabilized 5.1 8 UN 3149 II  
**Classification:** Hydrogen Peroxide and Peracetic Acid Mixture, Stabilized UN 3149  
**EmS:** 5.1-02  
**Labeling:** 5.1 & 8  
**LQ, ADR [l/kg]** 0,5

### 14.3 Classification according to IATA

Forbidden for transported by air.

## 15. Regulatory Information

The product is classified and marked according to EC-Guidelines

In accordance with Directives 67/548/EEC and 1999/45/EC this product is classified as corrosive and oxidising,

### Risk Phrases

R 22: Harmful in contact with skin  
R 34: Causes burns.  
R 36/38: Irritating to eyes and skin.  
R 41: Risk of serious damage to eyes.

### Safety Phrases

S 3/7: Keep container tightly closed in a cool place. Only use vented caps.  
S 14: Keep away from identified in Section 7: *Handling and Storage*.  
S 23: Do not breathe gas/fumes/vapour/spray.  
S 26: In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice.  
S 28: After contact with skin immediately flush affect area with copious amounts of water.  
S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 61: Avoid release to the environment. Refer to Section 13: *Disposal Considerations*.

### National Legislation

Follow all relevant national laws or other national relevant measures

### 16. Other information

The information provide in this Material Safety Data Sheet is correct to the best of our knowledge. This information given is designed only as 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 in this document and may not be valid if the product is used in combination with any other materials or processes, unless specified in the text.

### Guidelines

- 2001/58/EC
- 67/548/EEC
- 1999/45/EC
- 91/689/EEC
- ADR (2003)
- IMDG-Code (30. Amdt.)
- IATA-DGR (2003)