



# MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 08/13/2013

Version 1.1

## SECTION 1. Identification

### Product identifier

|                |   |
|----------------|---|
| Product number | 107210  |
| Product name   | Hydrogen peroxide 30% (Perhydrol®) (stabilized for higher storage temp.) for analysis EMSURE® ACS,ISO |

### Relevant identified uses of the substance or mixture and uses advised against

|                 |                      |
|-----------------|----------------------|
| Identified uses | Reagent for analysis |
|-----------------|----------------------|

### Details of the supplier of the safety data sheet

|         |   |
|---------|---|
| Company | EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   SDS Phone Support: +1-978-715-1335   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) |
|---------|---|

|                     |  |
|---------------------|--|
| Emergency telephone | 800-424-9300 CHEMTREC (USA)<br>+1-703-527-3887 CHEMTREC (International)<br>24 Hours/day; 7 Days/week |
|---------------------|--|

## SECTION 2. Hazards identification

### GHS Classification

Acute toxicity, Category 4, Oral, H302  
Serious eye damage, Category 1, H318

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

### GHS-Labeling

#### Hazard pictograms



#### Signal Word

Danger

#### Hazard Statements

H302 Harmful if swallowed.  
H318 Causes serious eye damage.

#### Precautionary Statements

P280 Wear eye protection.

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P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P313 Get medical advice/ attention.

## OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature                      Aqueous solution

### Hazardous ingredients

*Chemical Name ( Concentration)*

CAS-No.

*hydrogen peroxide ( >= 30 % - < 50 % )*

7722-84-1

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## SECTION 4. First aid measures

### Description of first-aid measures

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

#### *Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

Dizziness, Unconsciousness, Diarrhea, Nausea, Vomiting, Headache, Convulsions, muscle twitching, insomnia, shock, Irritation and corrosion, conjunctivitis

Risk of serious damage to eyes.

### Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Not combustible.

Has a fire-promoting effect due to release of oxygen.

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### **Environmental precautions**

Do not empty into drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Observe label precautions.

### **Conditions for safe storage, including any incompatibilities**

#### *Requirements for storage areas and containers*

Close containers in such a way to enable internal pressure to escape (e.g. excess pressure valve).

No metal containers.

Tightly closed. Protected from light. Do not store near combustible materials.

Store at +5°C to +30°C (+41°F to +86°F).

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

| Basis                              | Value                             | Threshold limits               | Remarks |
|------------------------------------|-----------------------------------|--------------------------------|---------|
| <i>hydrogen peroxide 7722-84-1</i> |                                   |                                |         |
| ACGIH                              | Time Weighted Average (TWA):      | 1 ppm                          |         |
| NIOSH/GUIDE                        | Recommended exposure limit (REL): | 1 ppm<br>1.4 mg/m <sup>3</sup> |         |
| OSHA_TRANS                         | PEL:                              | 1 ppm<br>1.4 mg/m <sup>3</sup> |         |
| Z1A                                | Time Weighted Average (TWA):      | 1 ppm<br>1.4 mg/m <sup>3</sup> |         |

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

#### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

#### Eye/face protection

Tightly fitting safety goggles

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Other protective equipment:

protective clothing

#### Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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## SECTION 9. Physical and chemical properties

Physical state liquid  
Color colorless

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|  |   |
|--|---|
| Odor                                   | slight                                      |
| Odor Threshold                         | No information available.                   |
| pH                                     | 2 - 4<br>at 68 °F ( 20 °C)                  |
| Melting point                          | -26 °C                                      |
| Boiling point/boiling range            | 225 °F ( 107 °C)<br>at 1,013 hPa            |
| Flash point                            | not applicable                              |
| Evaporation rate                       | No information available.                   |
| Flammability (solid, gas)              | No information available.                   |
| Lower explosion limit                  | No information available.                   |
| Upper explosion limit                  | No information available.                   |
| Vapor pressure                         | ca. 18 hPa<br>at 68 °F ( 20 °C)             |
| Relative vapor density                 | No information available.                   |
| Relative density                       | 1.11 g/cm <sup>3</sup><br>at 68 °F ( 20 °C) |
| Water solubility                       | at 68 °F ( 20 °C)<br>soluble                |
| Partition coefficient: n-octanol/water | No information available.                   |
| Autoignition temperature               | No information available.                   |
| Decomposition temperature              | > 212 °F ( > 100 °C)                        |
| Viscosity, dynamic                     | No information available.                   |
| Explosive properties                   | Not classified as explosive.                |

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## SECTION 10. Stability and reactivity

### Reactivity

See below

### Chemical stability

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heat-sensitive  
Sensitivity to light

#### *Stabilizer*

Sodium stannate(IV)

tri-sodium phosphate

#### **Possibility of hazardous reactions**

Risk of explosion with:

Risk of ignition or formation of inflammable gases or vapors with:

hydrazine and derivatives, hydrides, combustible substances, Ether, anhydrides, Oxidizing agents, Organic Substances, peroxy compounds, permanganates, organic solvent, organic nitro compounds, brass, Alkali metals, alkali salts, Alkaline earth metals, Metals, metallic oxides, metallic salts, nonmetals, nonmetallic oxides, Aldehydes, Alcohols, Amines, Ammonia, acids, strong alkalis, Acetaldehyde, Acetone, Activated charcoal, anilines, Lead, Powdered metals, acetic acid, Acetic anhydride, Potassium, iodides, potassium permanganate, Methanol, sodium, oils, phosphorus, Oxides of phosphorus, conc. sulfuric acid, Heavy metals

silver, in powder form

alkali hydroxides, with, Heavy metals

vinyl acetate, with, Catalyst

Exothermic reaction with:

alkali hydroxides, Metals, Nitric acid, zinc oxide, metallic salts

phenol, with, metal catalysts

#### **Conditions to avoid**

Heating.

#### **Incompatible materials**

no information available

#### **Hazardous decomposition products**

no information available

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## **SECTION 11. Toxicological information**

### **Information on toxicological effects**

#### *Likely route of exposure*

Inhalation, Eye contact, Skin contact

#### *Target Organs*

Eyes

Skin

Lungs

Gastro-intestinal system

head

Respiratory organs

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## *Acute oral toxicity*

absorption

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate: 1,667 mg/kg

Calculation method

## *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

Acute toxicity estimate: > 20 mg/l; 4 h

Calculation method

## *Skin irritation*

After long-term exposure to the chemical: Causes skin burns.

## *Eye irritation*

conjunctivitis

Mixture causes serious eye damage.

## *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

## *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

|       |  |
|-------|--|
| IARC  | No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| OSHA  | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |
| NTP   | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| ACGIH | Confirmed animal carcinogen with unknown relevance to humans.  |
|       | hydrogen peroxide 7722-84-1  |

## **Further information**

Systemic effects:

Headache, Dizziness, Nausea, Vomiting, Diarrhea, insomnia, muscle twitching, Convulsions, Unconsciousness, shock

Handle in accordance with good industrial hygiene and safety practice.

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## Ingredients

### *hydrogen peroxide*

#### *Acute oral toxicity*

Acute toxicity estimate: 500.1 mg/kg

Expert judgment

#### *Acute inhalation toxicity*

Acute toxicity estimate: 11.1 mg/l; vapor

Expert judgment

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## SECTION 12. Ecological information

### Ecotoxicity

No information available.

### Persistence and degradability

#### *Biodegradability*

Readily biodegradable.

### Bioaccumulative potential

No information available.

### Mobility in soil

No information available.

### *Additional ecological information*

No interference with wastewater treatment plants are to be expected when used properly.

Discharge into the environment must be avoided.

## Ingredients

### *hydrogen peroxide*

#### *Toxicity to fish*

LC50 Pimephales promelas (fathead minnow): 16.4 mg/l; 96 h (IUCLID)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 2.3 mg/l; 48 h (ECOTOX Database)

NOEC Daphnia magna (Water flea): 0.63 mg/l; 21 d (External MSDS)

#### *Toxicity to algae*

IC50 Pseudokirchneriella subcapitata (green algae): 5.7 mg/l; 72 h (ECOTOX Database)

Growth rate NOEC Skeletonema costatum: 0.63 mg/l; 72 h (External MSDS)

#### *Toxicity to bacteria*

static test EC50 activated sludge: 466 mg/l; 30 min

OECD Test Guideline 209

static test EC50 activated sludge: > 1,000 mg/l; 3 h

OECD Test Guideline 209

#### *Biodegradability*

Readily biodegradable.

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Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

|                           |                                     |
|---------------------------|-------------------------------------|
| UN number                 | UN 2014                             |
| Proper shipping name      | HYDROGEN PEROXIDE, AQUEOUS SOLUTION |
| Class                     | 5.1 ( 8)                            |
| Packing group             | II                                  |
| Environmentally hazardous | --                                  |

### Air transport (IATA)

|                              |   |
|------------------------------|---|
| UN number                    | UN 2014                                   |
| Proper shipping name         | HYDROGEN PEROXIDE, AQUEOUS SOLUTION       |
| Class                        | 5.1 ( 8)                                  |
| Packing group                | II  |
| Environmentally hazardous    | --  |
| Special precautions for user | yes<br><b>Not permitted for transport</b> |

### Sea transport (IMDG)

|                              |                                     |
|------------------------------|-------------------------------------|
| UN number                    | UN 2014                             |
| Proper shipping name         | HYDROGEN PEROXIDE, AQUEOUS SOLUTION |
| Class                        | 5.1 ( 8)                            |
| Packing group                | II                                  |
| Environmentally hazardous    | --                                  |
| Special precautions for user | yes                                 |
| EmS                          | F-H S-Q                             |

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## SECTION 15. Regulatory information

### United States of America

#### OSHA Hazards

Oxidizer  
Harmful if swallowed.  
Target organ effects  
Corrosive to skin  
Corrosive to eyes  
Corrosive by inhalation.

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## Carcinogen

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

## SARA 311/312 Hazards

Reactivity Hazard  
Acute Health Hazard  
Chronic Health Hazard

## SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

## SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

### *Ingredients*

hydrogen peroxide 7722-84-1

## Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

### *Ingredients*

tri-sodium phosphate

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

### *Ingredients*

tri-sodium phosphate

## DEA List I

Not listed

## DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

#### *Ingredients*

hydrogen peroxide

### Pennsylvania Right To Know

#### *Ingredients*

water

hydrogen peroxide

### New Jersey Right To Know

#### *Ingredients*

water

hydrogen peroxide

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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## Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Full text of H-Statements referred to under sections 2 and 3.

|      |                            |
|------|----------------------------|
| H302 | Harmful if swallowed.      |
| H318 | Causes serious eye damage. |

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 08/13/2013

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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