

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Trade name : 3% Hydrogen Peroxide WFI Sterile Solution
 Product code : 1S07

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Surface cleaner

1.3. Details of the supplier of the safety data sheet

STERIS Corporation
 P. O. Box 147, St. Louis, MO 63166, US
 Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

1.4. Emergency telephone number

Emergency number : US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Eye Irrit. 2A H319

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H319 - Causes serious eye irritation
 Precautionary statements (GHS-US) : P280 - Wear protective gloves/protective clothing and eye/face protection
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337+P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable
 Full text of H-phrases: see section 16

3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|-------------------|--------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hydrogen peroxide | (CAS No) 7722-84-1 | 3 | Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412 |

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SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical attention. |
| First-aid measures after skin contact | : Immediately flush skin with plenty of water for at least 15 minutes. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention. |
| First-aid measures after ingestion | : Do NOT induce vomiting. If victim completely conscious/alert. Rinse mouth. Give water or milk if the person is fully conscious. Immediately call a POISON CENTER or doctor/physician. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|--------------------------------------|--------------------------------------------------------------------------------------------------|
| Symptoms/injuries after inhalation | : May be irritating to the mucous membranes and to the respiratory system. |
| Symptoms/injuries after skin contact | : Frequent or prolonged contact with skin may cause dermal irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |
| Symptoms/injuries after ingestion | : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. |

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | : Flood with plenty of water. |
| Unsuitable extinguishing media | : Organic compounds. As hydrogen peroxide may react with a variety of organic materials and can form explosive mixtures, shock sensitive compounds, and initiate fire. Foam is not effective as oxygen and heat continue to be generated under the foam blanket. |

5.2. Special hazards arising from the substance or mixture

| | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous decomposition products in case of fire | : On decomposition releases oxygen which may intensify fire. Containers may swell and burst during a fire due to internal pressure caused by heat. |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

5.3. Advice for firefighters

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Firefighting instructions | : Exercise caution when fighting any chemical fire. |
| Protective equipment for firefighters | : Use self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information | : Oxygen evolution decomposition may burst sealed containers and accelerate the burning rates of other combustible materials. Damp material in contact with paper, wood, cloth, etc. may cause spontaneous combustion of the organic material. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|---------------------------------------------------------------------------------------------------------|
| General measures | : Ensure adequate ventilation. Do not breathe fumes, vapors. Avoid contact with skin, eyes and clothes. |
|------------------|---------------------------------------------------------------------------------------------------------|

6.1.1. For non-emergency personnel

| | |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Protective equipment | : Wear protective gloves and eye/face protection. For further information refer to section 8 : Exposure-controls/personal protection. |
| Emergency procedures | : Stop leak if safe to do so. Evacuate unnecessary personnel. |

6.1.2. For emergency responders

| | |
|----------------------|----------------------------------------------|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area. |

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Do not absorb in sawdust, paper, cloth or other combustible absorbents. Comply with applicable local, national and international regulation.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Read label before use. Provide good ventilation in process area to prevent formation of vapour. Avoid all eye and skin contact and do not breathe vapor and mist. Keep away from incompatible materials. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not wear leather soled shoes.

Hygiene measures : Take care for general good hygiene and housekeeping. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated clothing should be washed thoroughly in order to eliminate a delayed potential fire hazard.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

Storage conditions : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Incompatible materials : Strong alkalis. Strong oxidizing agents. Organic materials. Reducing agents. Metal salts. Alkali metals. wood. Paper. Copper and its alloys.

Prohibitions on mixed storage : Do not store near oxidizing agents. Keep away from incompatible materials.

Storage area : Store in dry, cool, well-ventilated area.

Special rules on packaging : Correctly labelled.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Hydrogen peroxide (7722-84-1) | | |
|-------------------------------|-------------------------------------|-----------------------|
| USA ACGIH | ACGIH TWA (ppm) | 1 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 1,4 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 1 ppm |

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective clothing. Gloves. Protective eyewear.



Hand protection : Wear protective gloves. Use neoprene gloves. Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected.

Eye protection : Wear protective eyewear.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Work in well-ventilated zones or use proper respiratory protection. Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--------------------------------------------|-----------------------------------|
| Physical state | : Liquid |
| Appearance | : Clear. |
| Colour | : Colourless. |
| Odour | : Odourless. |
| Odour threshold | : No data available |
| pH | : 4.3 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Self ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : ca. 1.010 g/ml Specific Gravity |
| Solubility | : Water: completely soluble |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : Oxidizer. |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Strong alkalis. Strong oxidizers. Organic materials. Reducing agent. Alkali metals. Metal salts. Readily oxidizable materials such as paper, wood, sulfur and aluminum. Copper and its alloys.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Toxic fumes may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Hydrogen peroxide (7722-84-1)

| | |
|---------------|-----------|
| LD50 oral rat | 801 mg/kg |
|---------------|-----------|

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| Hydrogen peroxide (7722-84-1) | |
|-------------------------------|-----------------------------------------|
| LD50 dermal rat | 4060 mg/kg |
| LD50 dermal rabbit | 2000 mg/kg |
| LC50 inhalation rat (mg/l) | 2 g/m ³ (Exposure time: 4 h) |
| ATE (oral) | 801,000 mg/kg bodyweight |
| ATE (dermal) | 2000,000 mg/kg bodyweight |
| ATE (gases) | 4500,000 ppmV/4h |
| ATE (vapours) | 2,000 mg/l/4h |
| ATE (dust,mist) | 2,000 mg/l/4h |

| | |
|-----------------------------------|--------------------------------------------------------------------------------------|
| Skin corrosion/irritation | : Not classified pH: 4.3 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 4.3 |
| Respiratory or skin sensitisation | : Not classified Based on available data, the classification criteria are not met |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified Based on available data, the classification criteria are not met |

| Hydrogen peroxide (7722-84-1) | |
|-------------------------------|----------------------|
| IARC group | 3 - Not classifiable |

| | |
|----------------------------------------------------|--------------------------------------------------------------------------------------|
| Reproductive toxicity | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (single exposure) | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available data, the classification criteria are not met |
| Aspiration hazard | : Not classified Based on available data, the classification criteria are not met |

SECTION 12: Ecological information

12.1. Toxicity

| Hydrogen peroxide (7722-84-1) | |
|--------------------------------|----------------------------------------------------------------------------|
| LC50 fishes 1 | 16.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas) |
| EC50 Daphnia 1 | 7.7 mg/l (Exposure time: 24 h - Species: Daphnia magna) |
| EC50 other aquatic organisms 1 | 2.5 mg/l (Exposure time: 72 h - Species: Chlorella vulgaris) |
| LC50 fish 2 | 18 - 56 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static]) |
| EC50 Daphnia 2 | 18 - 32 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| 3% Hydrogen Peroxide WFI Sterile Solution | |
|-------------------------------------------|------------------|
| Bioaccumulative potential | Not established. |

| Hydrogen peroxide (7722-84-1) | |
|-------------------------------|----------------------|
| BCF fish 1 | (no bioaccumulation) |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be thoroughly rinsed with large quantities of clean water. Consult the appropriate authorities about waste disposal. |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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Additional information : Do not re-use empty containers. Container remains hazardous when empty. Continue to observe all precautions.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Hydrogen peroxide (7722-84-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 302 (Specific toxic chemical listings)

| | |
|----------------------------------------------------|---------------------------|
| SARA Section 302 Threshold Planning Quantity (TPQ) | 1000 (concentration >52%) |
|----------------------------------------------------|---------------------------|

15.2. International regulations

Not applicable

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

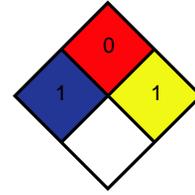
| | |
|---------------------------|-------------------------------------------------------------------|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4 |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhalation) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Ox. Liq. 1 | Oxidising Liquids, Category 1 |
| Skin Corr. 1A | skin corrosion/irritation Category 1A |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H271 | May cause fire or explosion; strong oxidiser |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H412 | Harmful to aquatic life with long lasting effects |

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- NFPA health hazard : 1 - Exposure would cause irritation with only minor residual Injury.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



SDS US (GHS HazCom 2012)

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.