

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

1.1. Product identifier

Product form : Mixture
 Trade name : 5.25% Hypochlorite WFI Sterile Solution
 Product code : 1S06

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

Use of the substance/mixture : Product for industrial use only
 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

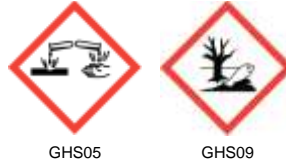
GHS-US classification

Skin Corr. 1B H314
 Eye Dam. 1 H318
 Aquatic Acute 1 H400

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
 H400 - Very toxic to aquatic life

Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapours, spray
 P273 - Avoid release to the environment
 P280 - Wear suitable protective clothing gloves, and eye/face protection
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P501 - Dispose of contents/container to Comply with applicable local, national and international regulation

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 |
|---------------------|--------------------|------|-----------------------------------------------|
| Sodium hypochlorite | (CAS No) 7681-52-9 | 5.25 | Skin Corr. 1B, H314, Aquatic Acute 1, H400 |

5.25% Hypochlorite WFI Sterile Solution

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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. Immediately get medical attention. |
| First-aid measures after skin contact | : 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. In all cases of doubt, or when symptoms persist, seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. |
| First-aid measures after ingestion | : Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting unless directed to do so by medical personnel. Give water to drink if victim completely conscious/alert. |

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

| | |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms/injuries | : Causes severe skin burns and eye damage. |
| Symptoms/injuries after inhalation | : The inhalation of airborne droplets or aerosols causes irritation of the respiratory tract. The following symptoms may occur: Runny nose. Sore throat. Coughing, sneezes. Shortness of breath. |
| Symptoms/injuries after eye contact | : Causes serious eye damage. May cause severe burns. |
| Symptoms/injuries after ingestion | : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

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 | : Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. |
|------------------------------|------------------------------------------------------------------------------------------------------------|

5.2. Special hazards arising from the substance or mixture

| | |
|--------------------------------------------------|-----------------------------------------------------------------|
| Hazardous decomposition products in case of fire | : Thermal decomposition generates: Fume. Sodium oxide. Chlorine |
|--------------------------------------------------|-----------------------------------------------------------------|

5.3. Advice for firefighters

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautionary measures fire | : Contact with combustible material may cause fire. Contact with metallic substances may release flammable hydrogen gas. Risk of fire in the presence of organic materials. |
| Firefighting instructions | : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| Protective equipment for firefighters | : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. |
| Other information | : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.1.1. For non-emergency personnel

| | |
|----------------------|---------------------------------------------------------------------------------------------|
| Protective equipment | : Wear suitable protective clothing. Wear protective gloves and eye/face protection. Boots. |
| Emergency procedures | : Evacuate unnecessary personnel. Stop leak if safe to do so. |

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.

5.25% Hypochlorite WFI Sterile Solution

Safety Data Sheet

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6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect in closed containers for disposal. Store away from other materials. Wash contaminated area with large amounts of water. Collect spillage. This material and its container must be disposed of in a safe way, and as per local legislation.
- Other information : Keep combustibles (wood, paper, oil, etc.) away from spilled material.

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 : Product for industrial use only. Wash hands thoroughly after handling. Provide good ventilation in process area to prevent formation of vapour. Do not breathe gas, fumes, vapour or spray. Keep container tightly closed to avoid moisture absorption and contamination.
- Hygiene measures : Wash hands thoroughly after handling. Take care for general good hygiene and housekeeping. Wash contaminated clothing prior to re-use.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations. A washing facility/water for eye and skin cleaning purposes should be present. Provide adequate ventilation.
- Storage conditions : Keep out of reach of children. Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
- Incompatible materials : Acids. Reducing agents. readily oxidizable materials such as paper, wood, sulfur and aluminum . Cellulose. Amines. ammonium salts. Ammonium compounds. Metals. Brass. Bronze.
- Heat and ignition sources : Store away from excessive heat . Remove all sources of ignition.
- 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

No additional information available

8.2. Exposure controls

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



- Hand protection : Wear protective gloves, rubber or plastic gloves.
- Eye protection : Chemical goggles. Face shield.
- Skin and body protection : Wear suitable protective clothing. Rubber apron, boots.
- Respiratory protection : Protection factors vary depending upon the type of respirator used. Use appropriate respiratory protection.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear to slightly hazy.
- Color : Colorless to yellow.
- Odor : No data available
- Odor threshold : No data available

5.25% Hypochlorite WFI Sterile Solution

Safety Data Sheet

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| | |
|--------------------------------------------|---------------------------------|
| pH | : 12.1 |
| 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 | : 1.076 – 1.09 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 | : No data available |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

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

Do not expose to heat. Light. Incompatible materials.

10.5. Incompatible materials

acids. Reducing agents. Amines. Combustible organic materials. Ammonium compounds. ammonium salts. readily oxidizable materials such as paper, wood, sulfur and aluminum . Cellulose. metals. Brass. Bronze. Iron.

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours. Chlorine. Sodium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| Sodium hypochlorite (7681-52-9) | |
|---------------------------------|---------------------------|
| LD50 oral rat | 8200 mg/kg |
| LD50 dermal rabbit | > 10000 mg/kg |
| ATE (oral) | 8200,000 mg/kg bodyweight |

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 12.1

Serious eye damage/irritation : Causes serious eye damage.

pH: 12.1

5.25% Hypochlorite WFI Sterile Solution

Safety Data Sheet

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| | |
|-----------------------------------|---------------------------------------------------------------------------------------|
| Respiratory or skin sensitisation | : Not classified Based on available date, the classification criteria are not met. |
| Germ cell mutagenicity | : Not classified Based on available date, the classification criteria are not met. |
| Carcinogenicity | : Not classified Based on available date, the classification criteria are not met. |

Sodium hypochlorite (7681-52-9)

| | |
|----------------------------------------------------|---------------------------------------------------------------------------------------|
| IARC group | 3 - Not classifiable |
| Reproductive toxicity | : Not classified Based on available date, the classification criteria are not met. |
| Specific target organ toxicity (single exposure) | : Not classified Based on available date, the classification criteria are not met. |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available date, the classification criteria are not met. |
| Aspiration hazard | : Not classified Based on available date, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

Sodium hypochlorite (7681-52-9)

| | |
|----------------|--------------------------------------------------------------------------------------|
| LC50 fishes 1 | 0.06 – 0.11 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 Daphnia 1 | 0.033 – 0.044 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| LC50 fish 2 | 4.5 – 7.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |

12.2. Persistence and degradability

5.25% Hypochlorite WFI Sterile Solution

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

12.3. Bioaccumulative potential

5.25% Hypochlorite WFI Sterile Solution

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Additional information | : Dispose of empty containers and wastes safely. Empty container retains product residue. Dilute residue with water. Product may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state or national legislation. Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials | : Avoid release to the environment. |

5.25% Hypochlorite WFI Sterile Solution

Safety Data Sheet

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SECTION 14: Transport information

In accordance with DOT

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.6.4. Inland waterway transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Sodium hypochlorite (7681-52-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

Not applicable

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision Date : 10/27/2015

Other information : None

Full text of H-phrases: see section 16:

| | |
|---------------|-----------------------------------------------|
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Skin Corr. 1B | skin corrosion/irritation Category 1B |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H400 | Very toxic to aquatic life |

NFPA health hazard : 2 – Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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.