

**STERRAD® Cassettes**

Version 1.5 Revision Date: 2015/04/29 SDS Number: 100000011187 Date of last issue: 2015/04/21
Date of first issue: 2015/03/13

SECTION 1. IDENTIFICATION

Product name : STERRAD® Cassettes
Substance name : STERRAD Cassettes

Manufacturer or supplier's details

Company name of supplier : Advanced Sterilization Products

Address : 33 Technology Drive
Irvine, CA 92618
US

Telephone : (800) 755-5900

Emergency telephone number : +1 949 261 1111

Recommended use of the chemical and restrictions on use

Recommended use : Product for sterilisation

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Oxidizing liquids : Category 2
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Skin corrosion : Sub-category 1B
Specific target organ toxicity - single exposure : Category 3
Chronic aquatic toxicity : Category 3
Contains 58% Hydrogen Peroxide

GHS Label element

Medicinal devices are not subject to GHS labeling.

Hazard pictograms :



Signal word : Danger

Hazard statements : H272 May intensify fire; oxidiser.
H302 + H332 Harmful if swallowed or if inhaled
H314 Causes severe skin burns and eye damage.


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H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
: Prevention:

P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Repeated exposure may cause skin dryness or cracking.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Liquid

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
hydrogen peroxide solution	7722-84-1	>= 50 - < 70


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SECTION 4. FIRST AID MEASURES

- | | | |
|---|---|--|
| If inhaled | : | If breathed in, move person into fresh air.
Artificial respiration and/or oxygen may be necessary.
Consult a physician.
Victim to lie down in the recovery position, cover and keep him warm. |
| In case of skin contact | : | Take off contaminated clothing and shoes immediately.
Wash off immediately with plenty of water.
Call a physician immediately.
Wash contaminated clothing before re-use.
Keep warm and in a quiet place. |
| In case of eye contact | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Consult a physician. |
| If swallowed | : | If swallowed, rinse mouth with water (only if the person is conscious).
Do NOT induce vomiting.
Drink plenty of water.
Call a physician immediately. |
| Most important symptoms and effects, both acute and delayed | : | burning or stinging of the eye
Itching
Redness
tearing
Irritation of the mouth, the esophagus and the gastrointestinal tract |
| Notes to physician | : | Treat symptomatically. |
-

SECTION 5. FIREFIGHTING MEASURES

- | | | |
|---------------------------------------|---|---|
| Suitable extinguishing media | : | Foam
Dry powder
Carbon dioxide (CO ₂)
Water spray |
| Unsuitable extinguishing media | : | Water spray jet |
| Specific hazards during fire-fighting | : | Heating can release hazardous gases.
Oxidizer. Contact with other material may cause fire. |
| Hazardous combustion products | : | No hazardous combustion products are known |
| Specific extinguishing methods | : | Remove undamaged containers from fire area if it is safe to do so. |


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Further information : Cool containers/tanks with water spray.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : In the event of an accidental release the emergency response team must respond based on a risk assessment and use personal protective equipment as appropriate. Ensure adequate ventilation. Do not breathe vapours or spray mist. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Dilute with plenty of water. Hold in a pond or diked area until hydrogen peroxide decomposes. Large spills: Dam up. Soak up with inert absorbent material. Keep in properly labelled containers. Small spills: Gently cover the spill with an absorbent towel or pad. Large spills + Small spills: Keep in suitable, closed containers for disposal. Treat recovered material as described in the section "Disposal considerations". Clean contaminated surface thoroughly. After cleaning, flush away traces with water. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : No data available

Advice on safe handling : Do not remove plastic wrap if leak indicator has changed from yellow to red. To avoid thermal decomposition, do not overheat. For personal protection see section 8. Avoid inhalation, ingestion and contact with skin and eyes. Use only with adequate ventilation.

Conditions for safe storage : To maintain product quality, do not store in heat or direct sunlight. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Contamination of the exterior of the primary container should


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be avoided.
 Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible rupture.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
hydrogen peroxide solution	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1.4 mg/m ³	NIOSH REL
		TWA	1 ppm 1.4 mg/m ³	OSHA Z-1
		TWA	1 ppm 1.4 mg/m ³	OSHA P0

Engineering measures : All personal protective equipment should be based on a risk assessment. Consult a Environment Health Safety expert if necessary.

Personal protective equipment

Respiratory protection : Engineering controls should always be the primary method of controlling exposures.
 In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
 If respiratory protective equipment is needed for certain activities, the type as well as the corresponding protection factor will depend upon the risk assessment and air concentrations, hazards, physical and warning properties of substances present.
 No personal respiratory protective equipment normally required.

Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Wear suitable protective clothing.

Protective measures : The type of protective equipment must be selected based on the Environmental Health and Safety risk assessment. Consult a Environmental Health and Safety expert if necessary.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
 Wash hands before breaks and at the end of workday.
 When using do not eat, drink or smoke.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Sealed cassette containing a liquid
Colour	: colourless
Odour	: odourless
Odour Threshold	: No data available
pH	: 1.0 - 3.0, (20 °C)
Melting point/range	: -52 °C
Boiling point/boiling range	: 118 °C
Flash point	: > 93.4 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No information available.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: > 1 g/ml (20 °C)
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: No data available

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Oxidizing properties : The substance or mixture is classified as oxidizing with the category 2.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : To avoid thermal decomposition, do not overheat.
Fire or intense heat may cause violent rupture of packages.
Contamination could cause product to become unstable and decompose.

Incompatible materials : Strong acids and strong bases
Heavy metal salts
Reducing agents
Combustible material
Contamination
Accelerators

Hazardous decomposition products : Oxygen

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate: 847.46 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 18.64 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:**hydrogen peroxide solution**

Acute oral toxicity : LD50 (Rat): > 225 mg/kg

Acute inhalation toxicity : LC50 (Rat): 170 mg/l
Exposure time: 4 h

Skin corrosion/irritation**Components:****hydrogen peroxide solution**

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Result: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation**Components:****hydrogen peroxide solution**

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

No data available

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.

Group 3: Not classifiable as to its carcinogenicity to humans

hydrogen peroxide solution

7722-84-1

OSHA

No component 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 component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

No data available

STOT - single exposure**Components:****hydrogen peroxide solution**

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Aspiration toxicity

No data available

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****hydrogen peroxide solution**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.7 mg/l
Exposure time: 24 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +
B).

Components:**hydrogen peroxide solution**

Additional ecological information : Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : In accordance with National, Federal, State and Local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International transport regulations**


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DOT

UN number	: 2014
Description of the goods	: Hydrogen peroxide, aqueous solutions
Class	: 5.1
Packing group	: II
Labels	: 5.1 (8)
Emergency Response	: 140
Guidebook Number	
Environmentally hazardous	: no

IATA

UN number	: 2014
Description of the goods	: Hydrogen peroxide, aqueous solution
Class	: 5.1
Packing group	: II
Labels	: 5.1 (8)
Packing instruction (CAO)	: 554
Packing instruction (PAX and CAO)	: 554
Packing instruction (LQ)	: Y540
Environmentally hazardous	: no

IMDG

UN number	: 2014
Description of the goods	: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Class	: 5.1
Packing group	: II
Labels	: 5.1 (8)
EmS Number 1	: F-H
EmS Number 2	: S-Q
Marine pollutant	: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category	:
Ship type	:

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****SARA 304 Extremely Hazardous Substances Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrogen peroxide	7722-84-1	1000	1695

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).


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This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

hydrogen peroxide solution	7722-84-1	50 - 70 %
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Pennsylvania Right To Know

hydrogen peroxide solution	7722-84-1	50 - 70 %
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water	7732-18-5	30 - 50 %
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New Jersey Right To Know

hydrogen peroxide solution	7722-84-1	50 - 70 %
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water	7732-18-5	30 - 50 %
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California Prop 65

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

Other regulations : Restricted to professional users.

This product is not subject to TSCA and TSCA 12(b) Export notification because Food, Drugs and cosmetic products are exempt.

The components of this product are reported in the following inventories:

REACH : Not in compliance with the inventory

: hydrogen peroxide solution

: water

CH INV : The formulation contains substances listed on the Swiss Inventory

: hydrogen peroxide solution

: water

TSCA : On TSCA Inventory

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


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AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory
: water

ISHL : Not in compliance with the inventory
: water

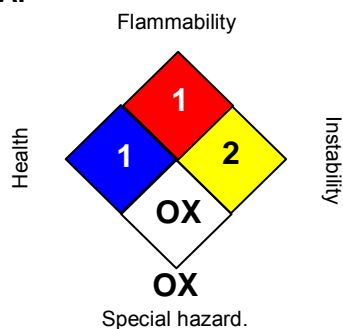
KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information
NFPA:

HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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Date and Number Formats

This document uses the following notation for printing dates and numbers:

Date:	Dec 31th, 2012	as	2012/12/31
Numbers:	123456,78	as	123,456.78

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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 and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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