SAFETY DATA SHEET

BIOQUELL HYDROGEN PEROXIDE STERILANT

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	BIOQUELL HYDROGEN PEROXIDE STERILANT
Other means of identification	:	Not applicable
Recommended use	:	Surface Disinfectant
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	Product is sold ready to use.
Company	:	Bioquell, Inc 702 Electronic Drive, Suite 200 19044 Horsham, USA (215) 682 0225 +1 215 682 0395 Bioquell.consumables@ecolab.com
Emergency telephone	:	Argentina: +54 11 5219 8871. Use access code: 333809
Issuing date	:	10.05.2022

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing liquids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Skin irritation	:	Category 2
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Short-term (acute) aquatic hazard	:	Category 2
Long-term (chronic) aquatic hazard	:	Category 3

GHS label elements

Hazard pictograms :

Signal Word	:	Danger
Hazard Statements	:	May intensify fire; oxidizer. Harmful if swallowed or if inhaled. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary Statements	:	**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other

combustible materials. Avoid breathing mist or vapors. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. 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/ doctor. If skin irritation occurs: Get medical advice/ attention. In case of fire: Use water spray to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical name	**CAS-No.**	**Concentration (%)**
Hydrogen peroxide	7722-84-1	30 - 60

SECTION 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Get medical attention if irritation develops and persists.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water

Unsuitable extinguishing media : Dry chemical
Carbon dioxide (CO2)
Foam

Specific hazards during fire fighting	:	Oxidizer. Contact with other material may cause fire.
Hazardous combustion products	:	Decomposition products may include the following materials: Oxygen
Special protective equipment for fire-fighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed. Eliminate any possible source of ignition.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. Isolate absorbed wastes contaminated with this product from other waste streams containing combustible materials (paper, wood fibers, cloth, etc.). Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Avoid contact with skin and eyes. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
Conditions for safe storage	:	Do not store on wooden pallets. Keep in the original container only, in a cool and well-ventilated place, out of the light and away from combustible materials and reducing agents (amines), acids, bases, heavy metal compounds (accelerators, siccative agents, metallic salts). Keep away from reducing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Storage temperature	:	5 °C to 25 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Hydrogen peroxide	7722-84-1	GV	1 ppm	AR OEL
Hydrogen peroxide	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1,4 mg/m3	NIOSH REL
		TWA	1 ppm 1,4 mg/m3	OSHA Z-1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : No special protective equipment required.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	clear, colorless
Odor	:	odorless
pH	:	1,5 - 3,5, (100 %)
Flash point	:	Not applicable
Odor Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available

Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1,1 - 1,2
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: -1,57Method: Calculated
Autoignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity, kinematic	:	0,980 mm2/s (40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 2.
Molecular weight	:	No data available
VOC	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Contamination may result in dangerous pressure increases - closed containers may rupture.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures. Heat. Exposure to sunlight.
Incompatible materials	:	Strong oxidizing agents Organic materials Strong acids Bases Reducing agents Metals Combustible material Heavy metal salts
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Oxygen

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes skin irritation.

Ingestion	:	Harmful if swallowed.
Inhalation	:	May cause respiratory tract irritation. May cause nose, throat, and lung irritation. Harmful if inhaled.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Irritation
Ingestion	:	No information available.
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate : 1.389 mg/kg
Acute inhalation toxicity	:	4 h Acute toxicity estimate : 2 mg/l Test atmosphere: dust/mist
Acute dermal toxicity	:	No data available
Skin corrosion/irritation	:	No data available
Serious eye damage/eye irritation	:	No data available
Respiratory or skin sensitization	:	No data available
Carcinogenicity	:	No data available
Reproductive effects	:	No data available
Germ cell mutagenicity	:	No data available
Teratogenicity	:	No data available
STOT-single exposure	:	No data available
STOT-repeated exposure	:	No data available
Aspiration toxicity	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Product

Toxicity to fish	:	No data available
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available

Components

Toxicity to fish	:	Hydrogen peroxide 96 h LC50 Pimephales promelas: 16,4 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates	:	Hydrogen peroxide 48 h LC50 Daphnia magna (Water flea): 2,4 mg/l

Components

Toxicity to algae	:	Hydrogen peroxide 72 h EC50 Skeletonema costatum (marine diatom): 1,38 mg/l

Persistence and degradability

Not applicable - inorganic

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport

UN number	:	2014
Description of the goods	:	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Class	:	5.1 (8)
Packing group	:	II
Environmentally hazardous	:	no

Sea transport (IMDG/IMO)

UN number	:	2014
Proper shipping name	:	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Class	:	5.1 (8)
Packing group	:	II
Marine pollutant	:	no

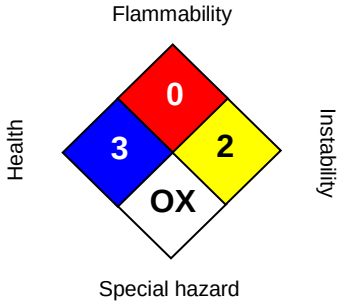
Self-Accelerating decomposition temperature (SADT)	:	60 °C

SECTION 15. REGULATORY INFORMATION

Argentina: Our Material Safety Data Sheet (MSDS) complies with the Resolution R.S.T. 801/15.

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2

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

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Version	:	1.0
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.