

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 03/31/2022

Reviewed on 03/31/2022

1 Identification

- **Product Identifier**
- **Trade Name: Buffer for Mercury Testing**
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** No further relevant information available.
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
 Alpha Measurement Solutions, LLC
 10540 Rockley Road
 Houston, TX 77099
 Phone: +1 832-456-4100
 www.alpha-measure.com
- **Emergency telephone number:** +1 832-456-4100

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Flame over circle

Oxidizing Liquids 1 H271 May cause fire or explosion; strong oxidizer.



Skin Irritation 2 H315 Causes skin irritation.
 Eye Irritation 2A H319 Causes serious eye irritation.

- **Label elements:**
- **Hazard pictograms:**



- **Signal word:** Danger
- **Hazard statements:**
 H271 May cause fire or explosion; strong oxidizer.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
- **Precautionary statements:**
 P220 Keep/Store away from clothing and other combustible materials
 P221 Take any precaution to avoid mixing with combustibles.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P283 Wear fire/flammable resistant/retardant clothing.
 P302+P352 If on skin: Wash with plenty of water.
 P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P306+P360 If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
 P332+P313 If skin irritation occurs: Get medical advice/attention.

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- P362+P364 Take off contaminated clothing and wash it before reuse.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
- P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

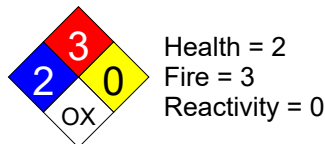
· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

11.1 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



The substance possesses oxidizing properties.

· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Physical Hazard = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

· **Chemical characterization: Substance**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

7631-99-4	Sodium Nitrate ⚠ Oxidizing Solids 2, H272	10-15%
71119-22-7	MOPS sodium salt ⚠ Skin Irritation 2, H315; Specific Target Organ Toxicity - Single Exposure 3, H335; Eye Irritation 2B, H320	2-12%
1132-61-2	4-morpholinopropanesulphonic acid ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335	2-12%

· **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

* 4 First-Aid Measures

· **Description of first aid measures**

· **General information:** If symptoms persist, call a physician.

· **After inhalation:** In case of unconsciousness place patient stably in the side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

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- **After eye contact:**
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
If easy to do so, remove contact lenses if worn.
If eye irritation occurs, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· PAC-1:

7631-99-4	Sodium Nitrate	4.1 mg/m ³
7722-84-1	Hydrogen Peroxide	10 ppm

· PAC-2:

7631-99-4	Sodium Nitrate	45 mg/m ³
7722-84-1	Hydrogen Peroxide	50 ppm

· PAC-3:

7631-99-4	Sodium Nitrate	270 mg/m ³
7722-84-1	Hydrogen Peroxide	100 ppm

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

* 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Select glove material based on penetration times, rates of diffusion and degradation.



Protective gloves

- **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
- **Eye protection:**



Tightly sealed goggles

- **Limitation and supervision of exposure into the environment:** None

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* 9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** Liquid
 - **Color:** Clear
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not available
- **Change in condition**
 - **Melting point/Melting range:** Not determined.
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
Explosive when mixed with combustible material.
- **Explosion limits:**
 - **Lower:** 0.0 Vol %
 - **Upper:** 0.0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** ≤23 hPa (≤17.3 mm Hg)
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
 - **Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - **Dynamic:** Not determined.
 - **Kinematic:** Not determined.
- **Solvent content:**
 - **VOC content:** 0.00 %
0.0 g/l / 0.00 lb/gal
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.

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- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7631-99-4 Sodium Nitrate

Oral	LD50	3,236 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rabbit)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

7722-84-1	Hydrogen Peroxide	3
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- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

- **Toxicity:**

- **Aquatic toxicity:**

7631-99-4 Sodium Nitrate

EC50	6,000 mg/l (Water flea)
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- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:** Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

- **UN-Number:** UN3098
- **DOT, ADR/ADN, IMDG, IATA** UN3098
- **UN proper shipping name:** Oxidizing liquid, corrosive, n.o.s. (Hydrogen peroxide, stabilized)
- **DOT** UN3098 OXIDIZING LIQUID, CORROSIVE, N.O.S. (HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED)
- **ADR/ADN** UN3098 OXIDIZING LIQUID, CORROSIVE, N.O.S. (HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED)
- **IMDG, IATA** OXIDIZING LIQUID, CORROSIVE, N.O.S. (HYDROGEN PEROXIDE, STABILIZED)
- **Transport hazard class(es):**

- **DOT**



- **Class:** 5.1 Oxidizing substances
- **Label:** 5.1, 8

- **ADR/ADN**



- **Class:** 5.1 (OC1) Oxidizing substances
- **Label:** 5.1+8

- **IMDG**



- **Class:** 5.1 Oxidizing substances
- **Label:** 5.1/8

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· **IATA**



- **Class:** 5.1 Oxidizing substances
- **Label:** 5.1 (8)
- **Packing group:** I
- **DOT, ADR/ADN, IMDG, IATA** I
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Warning: Oxidizing substances
- **Hazard identification number (Kemler code):** -
- **EMS Number:** F-A,S-Q
- **Segregation groups:** Peroxides
- **Stowage Category** D
- **Handling Code** H1 Keep as dry as reasonably practicable
- **Segregation Code** SG38 Stow "separated from" SGG2-ammonium compounds.
 SG49 Stow "separated from" SGG6-cyanides
 SG60 Stow "separated from" SGG16-peroxides

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **Transport/Additional information:**
- **DOT**
- **Quantity limitations:** On passenger aircraft/rail: Forbidden
 On cargo aircraft only: 2.5 L

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- **ADR/ADN**
 - **Excepted quantities (EQ):** Code: E0
 Not permitted as Excepted Quantity

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- **IMDG**
 - **Limited quantities (LQ):** 0
 - **Excepted quantities (EQ):** Code: E0
 Not permitted as Excepted Quantity
 - **UN "Model Regulation":** UN 3098 OXIDIZING LIQUID, CORROSIVE, N.O.S. (HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED), 5.1 (8), I

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
 No further relevant information available.
- **SARA (Superfund Amendments and Reauthorization):**

Section 355 (extremely hazardous substances):	7722-84-1 Hydrogen Peroxide
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Section 313 (Specific toxic chemical listings):	None of the ingredients are listed.
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TSCA (Toxic Substances Control Act):	All components have the value ACTIVE.
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· Hazardous Air Pollutants		
None of the ingredients are listed.		
· California Proposition 65:		
· Chemicals known to cause cancer:		
None of the ingredients are listed.		
· Chemicals known to cause reproductive toxicity for females:		
None of the ingredients are listed.		
· Chemicals known to cause reproductive toxicity for males:		
None of the ingredients are listed.		
· Chemicals known to cause developmental toxicity:		
None of the ingredients are listed.		
· New Jersey Right-to-Know List:		
7722-84-1	Hydrogen Peroxide	
· New Jersey Special Hazardous Substance List:		
7722-84-1	Hydrogen Peroxide	CO, MU, R3
· Pennsylvania Right-to-Know List:		
7631-99-4	Sodium Nitrate	
7722-84-1	Hydrogen Peroxide	
· Pennsylvania Special Hazardous Substance List:		
7722-84-1	Hydrogen Peroxide	E
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
None of the ingredients are listed.		
· TLV (Threshold Limit Value established by ACGIH):		
7722-84-1	Hydrogen Peroxide	A3
· NIOSH-Ca (National Institute for Occupational Safety and Health):		
None of the ingredients are listed.		

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



· **Signal word:** Danger

· **Hazard statements:**

H271 May cause fire or explosion; strong oxidizer.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· **Precautionary statements:**

P220 Keep/Store away from clothing and other combustible materials

P221 Take any precaution to avoid mixing with combustibles.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P283 Wear fire/flame resistant/retardant clothing.

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P302+P352	If on skin: Wash with plenty of water.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P306+P360	If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use CO ₂ , powder or water spray to extinguish.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Contact:**

· **Date of last revision/ revision number:** 03/31/2022 / 7

· **Abbreviations and acronyms:**

- ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety & Health Administration
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Oxidizing Liquids 1: Oxidizing liquids – Category 1
- Oxidizing Solids 2: Oxidizing solids – Category 2
- Skin Irritation 2: Skin corrosion/irritation – Category 2
- Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
- Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B
- Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**

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