

**Safety Data Sheet (SDS)**

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

Issue date 09/28/2020

Reviewed on 09/28/2020

**1 Identification**

- **Product Identifier**
- **Trade Name: Nitrate Ion-Selective Electrode Standard Solution**
- **Product Number:** NO<sub>3</sub>-HST, NO<sub>3</sub>-LST
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Nitrate Standard Solution - 1 ppm NO<sub>3</sub> as N - 100 ppm NO<sub>3</sub> as N
- **Application of the substance / the mixture:** Buffers, Filling & Calibration Solutions
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
Analytical Sensors & Instruments, Ltd.  
10540 Rockley Road  
Houston, TX 77099  
832-456-4100  
www.asi-sensors.com
- **Emergency telephone number:** 832-456-4100

**2 Hazard(s) Identification**

- **Classification of the substance or mixture:**  
The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.  
Non-Regulated Material
- **Label elements:**
- **Hazard pictograms:** Non-Regulated Material
- **Signal word:** Non-Regulated Material
- **Hazard statements:** Non-Regulated Material
- **Unknown acute toxicity:**  
This value refers to knowledge of known, established toxicological or ecotoxicological values.  
0 % 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)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

- **Hazard(s) not otherwise classified (HNOC):** The substance possesses oxidizing properties.

**3 Composition/Information on Ingredients**

- **Non-hazardous components:**

7732-18-5	Water, distilled water, deionized water	≥85%
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- **Chemical characterization: Substance**
- **Description:** Mixture of substances listed below with non-hazardous additions.

- **Dangerous Components:**

7631-99-4	Sodium Nitrate	Ox. Sol. 2, H272	≤2.5%
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#### · **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:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

#### · **After skin contact:**

Generally, the product does not irritate the skin.

Wash with soap and water.

If skin irritation occurs, consult a doctor.

#### · **After eye contact:**

Rinse opened eye for several minutes under running water.

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:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information.

#### · **Special hazards arising from the substance or mixture:**

Sodium Nitrate is an oxidizer and will release gas upon decomposition, which may intensify fires. Use caution.

#### · **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:**

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Avoid contact with skin, eyes and clothing.

Keep away from ignition sources.

· **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).

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.

#### · **Protective Action Criteria for Chemicals**

#### · **PAC-1:**

7631-99-4 Sodium Nitrate

4.1 mg/m<sup>3</sup>

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· <b>PAC-2:</b>		
7631-99-4	Sodium Nitrate	45 mg/m <sup>3</sup>
· <b>PAC-3:</b>		
7631-99-4	Sodium Nitrate	270 mg/m <sup>3</sup>

### 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** Protect from heat.
- **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.  
Protect from heat and direct sunlight.
- **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:**  
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.
- **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:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
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.

- **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

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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**9 Physical and Chemical Properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:**

Liquid

**Color:**

Clear, colorless

· **Odor:**

Odorless

· **Odor threshold:**

Not determined.

· **pH-value @ 20 °C (68 °F):**

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· **Change in condition****Melting point/Melting range:**

Not determined.

**Boiling point/Boiling range:**

≥100 °C (≥212 °F)

· **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.

· **Explosion limits:****Lower:**

0.0 Vol %

**Upper:**

0.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):**

≤23 hPa (≤17.3 mm Hg)

· **Density @ 20 °C (68 °F):**1.008 g/cm<sup>3</sup> (8.4118 lbs/gal)· **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.

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- **Solvent content:**
  - **Water:** >97.5 %
  - **VOC content:** 0.00 %
  - **Solids content:** <2.5 %
- **Other information:** No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** 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.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:**  
Strong acids, strong oxidizing agents, strong reducing agents, organic material and powdered metals.
- **Hazardous decomposition products:** Sodium Oxides and Nitrogen Oxides (NOx).

### 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:** No irritating effect.
- **On the eye:** No irritating effect.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations.  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories:**

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **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:** The hazards for the aquatic environment are unknown.

- **Aquatic toxicity:**

#### 7631-99-4 Sodium Nitrate

EC50 | 6,000 mg/l (Water flea)

- **Persistence and degradability:** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

## 13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging**
- **Recommendation:** Dispose of as unused product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA**                      Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA**                      Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:**    Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA**                              Non-Regulated Material
- **Environmental hazards:**                                      Not applicable.
- **Special precautions for user:**                              Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**                      Not applicable.
- **UN "Model Regulation":**                                      Non-Regulated Material

## 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· <b>Section 355 (extremely hazardous substances):</b>	None of the ingredients are listed.
· <b>Section 313 (Specific toxic chemical listings):</b>	None of the ingredients are listed.
· <b>TSCA (Toxic Substances Control Act):</b>	All components have the value ACTIVE.
· <b>Hazardous Air Pollutants</b>	None of the ingredients are listed.

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**Trade Name: Nitrate Ion-Selective Electrode Standard Solution****· 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:**

None of the ingredients are listed.

**· New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

**· Pennsylvania Right-to-Know List:**

7631-99-4 Sodium Nitrate

**· Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

**· Carcinogenic categories:****· EPA (Environmental Protection Agency):**

None of the ingredients are listed.

**· TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

**· GHS label elements** Non-Regulated Material**· Hazard pictograms:** Non-Regulated Material**· Signal word:** Non-Regulated Material**· Hazard statements:** Non-Regulated Material**· National regulations:**

None of the ingredients are listed.

**· 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.

**· Date of last revision/ revision number:** 09/28/2020 / 5**· 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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: 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

Ox. Sol. 2: Oxidizing solids – Category 2

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

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