1 Identification

· Product identifier
· Trade name: Ionization Buffer
· Article number: IB-LA-A5

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier: High-Purity Standards
  7221 Investment Drive, North Charleston, SC 29418 United States
  Telephone: +1-843-767-7900
  Fax: +1-843-767-7906
  highpuritystandards.com
  Email: info@highpuritystandards.com

· Information department: Product safety department
· Emergency telephone number:
  INFOTRAC
  Emergency telephone numbers 1-800-535-5053
  Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

· Classification of the substance or mixture
  The product is not classified, according to the Globally Harmonized System (GHS).

· Label elements
· GHS label elements Void
· Hazard pictograms Void
· Signal word Void
· Hazard statements Void
· Classification system:
· NFPA ratings (scale 0 - 4)

  Health = 0
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)

  Health = *0
  Fire = 0
  Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.
3 Composition/information on ingredients

· Chemical characterization: Mixtures
  · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:
  - 7647-01-0 hydrochloric acid 1.0%

· Chemical identification of the substance/preparation
  - 7732-18-5 water, distilled, conductivity or of similar purity 94.0%
  - 1312-81-8 lanthanum oxide 5.0%

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.
  · After eye contact: Rinse opened eye for several minutes under running water.
  · After swallowing: If symptoms persist consult 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.
  · Special hazards arising from the substance or mixture No further relevant information available.
  · Advice for firefighters
  · Protective equipment: No special measures required.

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 (sand, diatomite, acid binders, universal binders, sawdust).
· 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:**
  - 1312-81-8 lanthanum oxide: 4 mg/m³
  - 7647-01-0 hydrochloric acid: 1.8 ppm

- **PAC-2:**
  - 1312-81-8 lanthanum oxide: 44 mg/m³
  - 7647-01-0 hydrochloric acid: 22 ppm

- **PAC-3:**
  - 1312-81-8 lanthanum oxide: 270 mg/m³
  - 7647-01-0 hydrochloric acid: 100 ppm

Handling and storage

- Handling:
  - Precautions for safe handling: No special measures required.
  - Information about protection against explosions and fires: No special measures required.

- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: None.
  - Specific end use(s): No further relevant information available.

Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters
  - Components with limit values that require monitoring at the workplace:
    - 7647-01-0 hydrochloric acid
      - PEL: Ceiling limit value: 7 mg/m³, 5 ppm
      - REL: Ceiling limit value: 7 mg/m³, 5 ppm
      - TLY: Ceiling limit value: 2.98 mg/m³, 2 ppm

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      - The usual precautionary measures for handling chemicals should be followed.
    - Breathing equipment: Not required.
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- **Protection of hands:**
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.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the 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 can not 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 found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Goggles recommended during refilling.

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9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - **Form:** Liquid
    - **Color:** colorless
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 100 °C (212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

- **Density at 20 °C (68 °F):** 1.277 g/cm³ (10.65657 lbs/gal)

- **Bulk density:** 1,277 kg/m³
- **Relative density** Not determined.
- **Vapor density** Not determined.
## 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**
  - **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**: 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**:
    - 7647-01-0 hydrochloric acid
      - Oral LD50 900 mg/kg (rabbit)
  - **Primary irritant effect**:
    - **on the skin**: No irritant effect.
    - **on the eye**: No irritating effect.
  - **Sensitization**: No sensitizing effects known.
  - **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.
12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- 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: 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: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: Not regulated
- UN proper shipping name
  - DOT, ADR, IMDG, IATA: Not regulated
15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Sara
    · Section 355 (extremely hazardous substances):
      7647-01-0 hydrochloric acid
    · Section 313 (Specific toxic chemical listings):
      7647-01-0 hydrochloric acid
    · TSCA (Toxic Substances Control Act):
      All components have the value ACTIVE.
    · Hazardous Air Pollutants
      7647-01-0 hydrochloric acid
    · Proposition 65
      · Chemicals known to cause cancer:
        None of the ingredients is listed.
      · Chemicals known to cause reproductive toxicity for females:
        None of the ingredients is listed.
      · Chemicals known to cause reproductive toxicity for males:
        None of the ingredients is listed.
      · Chemicals known to cause developmental toxicity:
        None of the ingredients is listed.
  · Carcinogenic categories
    · EPA (Environmental Protection Agency)
      None of the ingredients is listed.
Safety Data Sheet
acc. to OSHA HCS

Printing date 05/21/2020  Reviewed on 05/21/2020

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- **TLV (Threshold Limit Value established by ACGIH)**
  7647-01-0 hydrochloric acid

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:**
  High-Purity Standards
  Tel: 843-767-7900
  Fax: 843-767-7906
- **Date of preparation / last revision** 05/21/2020 / -
- **Abbreviations and acronyms:**
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  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
  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
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit