1 Identification

- **Product identifier**
  - **Trade name:** ICP-MS Bromide Standard
  - **Article number:** ICP-BR-10

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** High-Purity Standards
    Address: PO Box 41727 Charleston, SC 29423 United States
    Telephone: +1-843-767-7900
    Fax: +1-843-767-7906
    Website: highpuritystandards.com
    Email: info@highpuritystandards.com

- **Emergency 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 Health = 0
    FIRE 0 Fire = 0
    REACTIVITY 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.
Trade name: ICP-MS Bromide Standard

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:
    12124-97-9 ammonium bromide 8.1 mg/m³
  · PAC-2:
    12124-97-9 ammonium bromide 89 mg/m³
  · PAC-3:
    12124-97-9 ammonium bromide 530 mg/m³

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7 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.

8 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:
  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 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.
  - 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.

9 Physical and chemical properties

- Information on basic physical and chemical properties:
- General Information:
- Appearance:
  - Form: Liquid
  - Color: colorless
Trade name: ICP-MS Bromide Standard

49.4.3 · 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: 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:
  Water: 100.0 %
  VOC content: 0.00 %
  0.0 g/l / 0.00 lb/gal
· Solids content: 0.0 %
· Other information No further relevant information available.

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.
Trade name: ICP-MS Bromide Standard

- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### Information on toxicological effects

- **Acute toxicity:**
  - 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.

### Carcinogenic categories

- **IARC (International Agency for Research on Cancer)**
  None of the ingredients is listed.
- **NTP (National Toxicology Program)**
  None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
  None of the ingredients is listed.

## 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.
## 14 Transport information

- **UN-Number**  
  - DOT, ADR, IMDG, IATA: not regulated

- **UN proper shipping name**  
  - DOT, ADR, IMDG, IATA: not regulated

- **Transport hazard class(es)**  
  - DOT, ADR, ADN, IMDG, IATA: not regulated

- **Packing group**  
  - DOT, ADR, IMDG, IATA: not regulated

- **Environmental hazards**: Not applicable.

- **Special precautions for user**: Not applicable.

- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**: Not applicable.

- **UN "Model Regulation"**: not regulated

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

  - **Sara**
    - **Section 355 (extremely hazardous substances):**  
      None of the ingredients is listed.
    - **Section 313 (Specific toxic chemical listings):**  
      None of the ingredients is listed.
    - **TSCA (Toxic Substances Control Act):**  
      All components have the value ACTIVE.
    - **Hazardous Air Pollutants**  
      None of the ingredients is listed.
    - **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.

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49.4.3

· **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.

· **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)**
    None of the ingredients is listed.
  - **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** 08/15/2019 /
· **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)
  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