1 Identification

· Product identifier
  · Trade name: Arsenic as As+5 1000μg/mL in H2O
  · Article number: 10003-7
  · Details of the supplier of the safety data sheet
    · Manufacturer/Supplier:
      High-Purity Standards
      P.O. Box 41727
      Charleston, SC 29423
      Telephone: (843) 767-7900
      FAX: (843) 767-7906

· 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
  GHS08 Health hazard

  Carc. 1A H350 May cause cancer.

· Label elements
  · GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    GHS08

· Signal word: Danger

· Hazard-determining components of labeling:
  disodium hydrogenarsenate

· Hazard statements
  H350 May cause cancer.

· Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF exposed or concerned: Get medical advice/attention.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
Trade name: Arsenic as As+5 1000μg/mL in H2O

· Classification system:
  · NFPA ratings (scale 0 - 4)
     Health = 0
     Fire = 0
     Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  HEALTH
  Fire = *0
  Reactivity = 0

· Other hazards
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.

3 Composition/information on ingredients

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

· Dangerous components:
  7778-43-0 disodium hydrogenarsenate 0.1%

· Chemical identification of the substance/preparation
  7732-18-5 water, distilled, conductivity or of similar purity 99.9%

4 First-aid measures

· Description of first aid measures
  · 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: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- 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:
    None of the ingredients is listed.
  - PAC-2:
    None of the ingredients is listed.
  - PAC-3:
    None of the ingredients is listed.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
  - Information about protection against explosions and fires: Keep respiratory protective device available.
  - 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: 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 item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-43-0</td>
<td>disodium hydrogenarsenate</td>
<td>PEL: Long-term value: 0.01 mg/m³ as As; 29CFR1910.1018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL: Ceiling limit value: 0.002 mg/m³ as As; 15min; See Pocket Guide App. A</td>
</tr>
</tbody>
</table>
Trade name: Arsenic as As+5 1000μg/mL in H2O

47.1.4

TLV Long-term value: 0.01 mg/m³ as As

Ingredients with biological limit values:

7778-43-0 disodium hydrogenarsenate

BELL 35 µg As/L
Medium: urine
Time: end of workweek
Parameter: Inorganic arsenic plus methylated metabolites

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.

Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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.
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:

Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Color: colorless
10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**: Not applicable.
- **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: Arsenic as As+5 1000μg/mL in H2O

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 shows the following dangers according to internally approved calculation methods for preparations:

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:
  Water hazard class 3 (Self-assessment): extremely hazardous for water
  Do not allow product to reach ground water, water course or sewage system, even in small quantities.
  Danger to drinking water if even extremely small quantities leak into the ground.
- 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.
47.1.4 · Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

| · UN-Number | not regulated |
| · DOT, ADR, ADN, IMDG, IATA |
| · UN proper shipping name |
| · DOT, ADR, ADN, IMDG, IATA |
| · Transport hazard class(es) |
| · DOT, ADR, ADN, IMDG, IATA |
| · Class |
| · Packing group |
| · DOT, ADR, IMDG, IATA |
| · 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": |
| · 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): |
| 7778-43-0 disodium hydrogenarsenate |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |
| · TSCA new (21st Century Act) (Substances not listed) |
| 7778-43-0 disodium hydrogenarsenate |
| · Proposition 65 |
| · Chemicals known to cause cancer: |
| 7778-43-0 disodium hydrogenarsenate |
| · 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. |
Trade name: Arsenic as As+5 1000μg/mL in H2O

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

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency) (Substances not listed)**
    7732-18-5 water, distilled, conductivity or of similar purity
  - **TLV (Threshold Limit Value established by ACGIH)**
    7778-43-0 disodium hydrogenarsenate
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    7778-43-0 disodium hydrogenarsenate

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  - GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  disodium hydrogenarsenate

- **Hazard statements**
  H350 May cause cancer.

- **Precautionary statements**
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Wear protective gloves/protection clothing/eye protection/face protection.
  IF exposed or concerned: Get medical advice/attention.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **National regulations:**
  - **Additional classification according to Decree on Hazardous Materials:**
    Carcinogenic hazardous material group III (dangerous).

- **Information about limitation of use:**
  Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
  Exceptions can be made by the authorities in certain cases.

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

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**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

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**Trade name:** Arsenic as As+5 1000μg/mL in H2O

### Date of preparation / last revision

05/23/2019 / -

### 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)
- NFFA: 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
- BEI: Biological Exposure Limit
- Carc. 1A: Carcinogenicity – Category 1A