1 Identification

- **Product identifier**
  - Trade name: Potassium
  - Article number: 10M41-2

- **Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier:
    - High-Purity Standards
    - PO Box 41727 Charleston, SC 29423 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**
  - GHS07

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

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

  - GHS07

- **Signal word**: Warning

- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.

- **Precautionary statements**
  - Wash thoroughly after handling.
  - Wear protective gloves / eye protection / face protection.
  - If on skin: Wash with plenty of water.
  - Specific treatment (see on this label).
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If skin irritation occurs: Get medical advice/attention.
  - Take off contaminated clothing and wash it before reuse.
  - If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)
Trade name: Potassium

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = *2
  - 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:
  - 7440-09-7 potassium 1.0%
  - 7647-01-0 hydrochloric acid 1.0%

- Chemical identification of the substance/preparation
  - 7732-18-5 water, distilled, conductivity or of similar purity 98.0%

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- 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.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions**: No special measures required.
- **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**

<table>
<thead>
<tr>
<th>PAC-1</th>
<th>7440-09-7 potassium</th>
<th>7647-01-0 hydrochloric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.3 mg/m³</td>
<td>1.8 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2</th>
<th>7440-09-7 potassium</th>
<th>7647-01-0 hydrochloric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 mg/m³</td>
<td>22 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3</th>
<th>7440-09-7 potassium</th>
<th>7647-01-0 hydrochloric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 mg/m³</td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

7 Handling and storage

- **Handling**:
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **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**: 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**:
  The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
  At this time, the remaining constituent has no known exposure limits.
**Trade name: Potassium**

<table>
<thead>
<tr>
<th>7647-01-0 hydrochloric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Ceiling limit value: 7 mg/m³, 5 ppm</td>
</tr>
<tr>
<td>REL Ceiling limit value: 7 mg/m³, 5 ppm</td>
</tr>
<tr>
<td>TLY Ceiling limit value: 2.98 mg/m³, 2 ppm</td>
</tr>
</tbody>
</table>

- **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.
    - Immediately remove all soiled and contaminated clothing.
    - 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.
      - 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
    - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Potassium

<table>
<thead>
<tr>
<th>· Change in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range:</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
</tr>
</tbody>
</table>

| · 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. |

<table>
<thead>
<tr>
<th>· Explosion limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
</tbody>
</table>

| · Vapor pressure at 20 °C (68 °F): | 23 hPa (17.3 mm Hg) |
| · Density at 20 °C (68 °F): | 1.0001 g/cm³ (8.34583 lbs/gal) |

| · Bulk density: | 1,000 kg/m³ |
| · Relative density: | Not determined. |
| · Vapor density: | Not determined. |
| · Evaporation rate: | Not determined. |

| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |

| · Partition coefficient (n-octanol/water): | Not determined. |

<table>
<thead>
<tr>
<th>· Viscosity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic: Not determined.</td>
</tr>
<tr>
<td>Kinematic: Not determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>· Solvent content:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water: 98.0 %</td>
</tr>
<tr>
<td>VOC content: 0.00 %</td>
</tr>
<tr>
<td>0.0 g/l / 0.00 lb/gal</td>
</tr>
</tbody>
</table>

| · Solids content: | 1.0 % |
| · 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. |
| · 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:** Irritant to skin and mucous membranes.
    - **on the eye:** Irritating effect.
  - **Sensitization:** No sensitizing effects known.
  - **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)**
    - 7647-01-0 hydrochloric acid 3
  - **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.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
  - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Trade name: Potassium

- 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
  - Class: 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 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):**
    - 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.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Potassium

- 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)
    7647-01-0 hydrochloric acid A4
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

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

- Hazard pictograms
  - Signal word
    Warning
  - Hazard statements
    H315 Causes skin irritation.
    H319 Causes serious eye irritation.
  - Precautionary statements
    Wash thoroughly after handling.
    Wear protective gloves / eye protection / face protection.
    If on skin: Wash with plenty of water.
    Specific treatment (see on this label).
    If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
    Continue rinsing.
    If skin irritation occurs: Get medical advice/attention.
    Take off contaminated clothing and wash it before reuse.
    If eye irritation persists: Get medical advice/attention.

- 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 08/27/2019 /
- 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
Trade name: Potassium

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
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A