1 Identification

- Product identifier
- Trade name: Custom Standard
- Part number: ICUS-5010
- Application of the substance / the mixture: Laboratory chemicals
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  ULTRA Scientific, Inc.
  250 Smith Street
  North Kingstown, RI 02852
  USA
- Information department:
  Telephone: (401) 294-9400
  Fax: (401) 295-2300
  E-mail: regulatory@ultrasci.com
- Emergency telephone number:
  US: (800) 424-9300
  Outside US: (703) 527-3887

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: Custom Standard

- Dangerous components: Void

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: 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></th>
<th>PAC-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>20 mg/m³</td>
<td>220 mg/m³</td>
</tr>
<tr>
<td>7631-99-4 sodium nitrate, containing in the dry state more than 16.3 per cent by weight of nitrogen</td>
<td>4.1 mg/m³</td>
<td>45 mg/m³</td>
</tr>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>17 mg/m³</td>
<td>90 mg/m³</td>
</tr>
<tr>
<td>7758-02-3 potassium bromide</td>
<td>9.2 mg/m³</td>
<td>100 mg/m³</td>
</tr>
<tr>
<td>3811-04-9 potassium chlorate</td>
<td>5.6 mg/m³</td>
<td>62 mg/m³</td>
</tr>
<tr>
<td>7758-01-2 potassium bromate</td>
<td>0.3 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
Trade name: Custom Standard

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Limit Value (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-01-2</td>
<td>potassium bromate</td>
<td>3.1</td>
</tr>
<tr>
<td>PAC-3:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7778-80-5</td>
<td>Potassium Sulfate</td>
<td>1,300</td>
</tr>
<tr>
<td>7631-99-4</td>
<td>sodium nitrate, containing in the dry state more than 16.3 per cent by weight of nitrogen</td>
<td>270</td>
</tr>
<tr>
<td>7681-49-4</td>
<td>sodium fluoride</td>
<td>1,100</td>
</tr>
<tr>
<td>7758-02-3</td>
<td>potassium bromide</td>
<td>610</td>
</tr>
<tr>
<td>3811-04-9</td>
<td>potassium chlorate</td>
<td>370</td>
</tr>
<tr>
<td>7758-01-2</td>
<td>potassium bromate</td>
<td>89</td>
</tr>
</tbody>
</table>

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**:
    - **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.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Fluid
      - **Color:** Colorless
    - **Odor:** Odorless
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

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

- **Flash point:** Not applicable.

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

- **Ignition temperature:**
  - **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 (mm Hg)

- **Density at 20°C (68 °F):** 1.00422 g/cm³ (lbs/gal)
  - **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.

- **Viscosity:**
  - Dynamic at 20°C (68 °F): 0.952 mPas
  - **Kinematic:** Not determined.

- **Solvent content:**
  - **Water:** 99.7 %
  - **VOC content:** 0.00 %
    - 0.0 g/l / 0.00 lb/gl

- **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.
- 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) |  |
| 7681-49-4 sodium fluoride | 3 |
| 7758-01-2 potassium bromate | 2B |

- 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: 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:** 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, IMDG, IATA: not regulated

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

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

- **Packing group**
  - DOT, 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):**
    - None of the ingredients is listed.

  - **Section 313 (Specific toxic chemical listings):**
    - 7758-01-2 potassium bromate

  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed.

  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      - 7758-01-2 potassium bromate
    - **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: Custom Standard

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

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    7758-01-2 potassium bromate B2, K/L(oral), CBD(inh)
  - **TLV (Threshold Limit Value established by ACGIH)**
    7681-49-4 sodium fluoride A4
  - **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.

- **Date of preparation / last revision** 11/08/2017 / -
- **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