1 Identification

- Product identifier
  - Trade name: Custom Standard
- Part number: ICUS-1597
- 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: +1-800-424-9300
    Outside US: +1-703-527-3887

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.
- Dangerous components:
  - 7447-40-7 potassium chloride 2.0%

(Contd. on page 2)
Trade name: Custom 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**: 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).
- **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></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>20 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7631-99-4 sodium nitrate, containing in the dry statemore than 16,3 per cent by weight of nitrogen</td>
<td>4.1 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>17 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAC-2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>220 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7631-99-4 sodium nitrate, containing in the dry statemore than 16,3 per cent by weight of nitrogen</td>
<td>45 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>90 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAC-3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>1,300 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7631-99-4 sodium nitrate, containing in the dry statemore than 16,3 per cent by weight of nitrogen</td>
<td>270 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 3)
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:** Not required.
  - **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:** Fluid
      - **Color:** According to product specification
    - **Odor:** Characteristic
    - **Odor threshold:** Not determined.
    - **pH-value:** Not determined.
46.0.5

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 100 ºC (212 ºF)

- 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 ºC (68 ºF): 23 hPa (17.3 mm Hg)

- Density at 20 ºC (68 ºF): 1.09474 g/cm³ (9.13561 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: Not determined.
  - Kinematic: Not determined.

- Solvent content:
  - Water: 93.0 %
  - VOC content: 0.00 %
  - 0.0 g/l / 0.00 lb/gl

- Solids content: 7.0 %

- 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:
      - ATE (Acute Toxicity Estimate)
        - Oral LD50 42,594 mg/kg (rat)
      - 7447-40-7 potassium chloride
        - Oral LD50 2,600 mg/kg (rat)
      - 7631-99-4 sodium nitrate, containing in the dry state more than 16.3 per cent by weight of nitrogen
        - Oral LD50 1,267 mg/kg (rat)
  - 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
    - 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:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - 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):** None of the ingredients is listed.
    - **TSCA (Toxic Substances Control Act):** All ingredients are 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.
### Trade name: Custom Standard

#### 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)**
  
  7681-49-4 sodium fluoride

- **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**: 03/12/2018 / -
- **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