1 Identification

- Product identifier
- Trade name: Custom Standard
- Part number: ICUS-3774
- 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: Health = 0
  FIRE: Fire = 0
  REACTIVITY: 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.

(Contd. on page 2)
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: 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>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>20 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>
</tr>
<tr>
<td>7632-00-0 sodium nitrite</td>
<td>6.4 mg/m³</td>
</tr>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>17 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5 Potassium Sulfate</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>45 mg/m³</td>
</tr>
<tr>
<td>7632-00-0 sodium nitrite</td>
<td>71 mg/m³</td>
</tr>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>90 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5 Potassium Sulfate</td>
<td>1,300 mg/m³</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:**
  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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

### Table

<table>
<thead>
<tr>
<th>Substance Code</th>
<th>Substance Description</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<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 mg/m³</td>
</tr>
<tr>
<td>7632-00-0</td>
<td>sodium nitrite</td>
<td>240 mg/m³</td>
</tr>
<tr>
<td>7681-49-4</td>
<td>sodium fluoride</td>
<td>1,100 mg/m³</td>
</tr>
</tbody>
</table>
### 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:** 0°C (°F)
  - **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):** 1.01487 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:** 98.9 %
  - **VOC content:** 0.00 %
    - 0.0 g/l / 0.00 lb/gl

**· Solids content:** 0.0 %

**· Other information** No further relevant information available.

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### 10 Stability and reactivity

**· Reactivity** No further relevant information available.
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  |
  - 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.
Trade name: Custom Standard

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

### 14 Transport information

<table>
<thead>
<tr>
<th>Item</th>
<th>DOT, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>not regulated</td>
</tr>
<tr>
<td>DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>not regulated</td>
</tr>
<tr>
<td>DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Class</td>
</tr>
<tr>
<td>DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>Packing group</td>
<td>not regulated</td>
</tr>
<tr>
<td>DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>not regulated</td>
</tr>
</tbody>
</table>

### 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):
      7632-00-0 sodium nitrite
    - 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.
    - Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.
Trade name: Custom Standard

- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)**
  None of the ingredients is listed.
- **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** 08/28/2017 / -
- **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