1 Identification

· Product identifier
  · Trade name: Custom Standard
  · Part number: ICUS-7129-250ML
  · 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.
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>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5</td>
<td>Potassium Sulfate</td>
<td>20 mg/m³</td>
<td></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>4.1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7758-02-3</td>
<td>potassium bromide</td>
<td>9.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7722-76-1</td>
<td>ammonium dihydrogenorthophosphate</td>
<td>17 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7681-11-0</td>
<td>potassium iodide</td>
<td>1.3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7681-49-4</td>
<td>sodium fluoride</td>
<td>17 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7778-80-5</td>
<td>Potassium Sulfate</td>
<td>220 mg/m³</td>
<td></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>45 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7758-02-3</td>
<td>potassium bromide</td>
<td>100 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7722-76-1</td>
<td>ammonium dihydrogenorthophosphate</td>
<td>190 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7681-11-0</td>
<td>potassium iodide</td>
<td>15 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</th>
</tr>
</thead>
<tbody>
<tr>
<td>7681-49-4</td>
<td>sodium fluoride</td>
<td>90 mg/m³</td>
</tr>
<tr>
<td>7778-80-5</td>
<td>Potassium Sulfate</td>
<td>1,300 mg/m³</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 mg/m³</td>
</tr>
<tr>
<td>7758-02-3</td>
<td>potassium bromide</td>
<td>610 mg/m³</td>
</tr>
<tr>
<td>7722-76-1</td>
<td>ammonium dihydrogenorthophosphate</td>
<td>1,100 mg/m³</td>
</tr>
<tr>
<td>7681-11-0</td>
<td>potassium iodide</td>
<td>87 mg/m³</td>
</tr>
<tr>
<td>7681-49-4</td>
<td>sodium fluoride</td>
<td>1,100 mg/m³</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:

  - 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.
Trade name: Custom Standard

- **Eye protection**: Goggles recommended during refilling.

## 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)**: 1.00446 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 %
  - 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
  - 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.
Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2017
Reviewed on 09/13/2017

Version Number 1

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 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 09/13/2017 / -
- 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