1 Identification

- Product identifier
  - Trade name: Custom Standard
- Part number: ICUS-5910
- Application of the substance / the mixture: Laboratory chemicals

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
  - Causes skin irritation.
  - 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.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Specific treatment (see on this label).
  - If skin irritation occurs: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.
  - Take off contaminated clothing and wash it before reuse.

(Contd. on page 2)
Trade name: Custom Standard

46.0.5

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:
  - 7697-37-2 nitric acid 1.98%

4 First-aid measures

- Description of first aid measures
  - 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.
- 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.
Trade name: Custom Standard

- **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>Concentration</th>
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<tbody>
<tr>
<td>7697-37-2</td>
<td>nitric acid</td>
</tr>
<tr>
<td>471-34-1</td>
<td>calcium carbonate</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>
</tr>
<tr>
<td>13446-18-9</td>
<td>magnesium nitrate hexahydrate</td>
</tr>
<tr>
<td>7757-79-1</td>
<td>potassium nitrate</td>
</tr>
<tr>
<td>12125-02-9</td>
<td>ammonium chloride</td>
</tr>
<tr>
<td>PAC-2:</td>
<td></td>
</tr>
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<td>PAC-3:</td>
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<td>potassium nitrate</td>
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<td>12125-02-9</td>
<td>ammonium chloride</td>
</tr>
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</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:**
  - 7697-37-2 nitric acid
    - PEL Long-term value: 5 mg/m³, 2 ppm
    - REL Short-term value: 10 mg/m³, 4 ppm
    - Long-term value: 5 mg/m³, 2 ppm
    - TLV Short-term value: 10 mg/m³, 4 ppm
    - Long-term value: 5.2 mg/m³, 2 ppm

- **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**
  - 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**

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**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.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
Trade name: Custom Standard

### 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)**
      - **Inhalative LC50/4 h**: 3,384 mg/L (rat)
Trade name: Custom Standard

7697-37-2 nitric acid

Inhalative LC50/4 h 67 mg/L (rat)

- 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)
    None of the ingredients is listed.
  - 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 known to be hazardous to 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: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN3264

(Contd. on page 7)
## Safety Data Sheet
### acc. to OSHA HCS

**Printing date**: 03/26/2018  
**Reviewed on**: 03/26/2018  
**Version Number**: 2

---

### Trade name: Custom Standard

<table>
<thead>
<tr>
<th>· UN proper shipping name</th>
<th>Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)</th>
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</thead>
<tbody>
<tr>
<td>· DOT</td>
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</tr>
<tr>
<td>· IMDG, IATA</td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)</td>
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<table>
<thead>
<tr>
<th>· Transport hazard class(es)</th>
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<tr>
<td>· DOT</td>
</tr>
<tr>
<td>· Class</td>
</tr>
<tr>
<td>· Label</td>
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<table>
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<td>· Class</td>
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<tr>
<th>· Packing group</th>
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<td>· DOT, IMDG, IATA</td>
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<th>· Environmental hazards:</th>
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<table>
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<tr>
<th>· Special precautions for user</th>
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<tbody>
<tr>
<td>Warning: Corrosive substances</td>
</tr>
<tr>
<td>· Danger code (Kemler):</td>
</tr>
<tr>
<td>· EMS Number:</td>
</tr>
<tr>
<td>· Segregation groups</td>
</tr>
<tr>
<td>· Stowage Category</td>
</tr>
<tr>
<td>· Stowage Code</td>
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</table>

<table>
<thead>
<tr>
<th>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</th>
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</thead>
<tbody>
<tr>
<td>Not applicable.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>· Transport/Additional information:</th>
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<tbody>
<tr>
<td>· DOT</td>
</tr>
<tr>
<td>· Quantity limitations</td>
</tr>
<tr>
<td>On passenger aircraft/rail: 5 L</td>
</tr>
<tr>
<td>On cargo aircraft only: 60 L</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>· IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Limited quantities (LQ)</td>
</tr>
<tr>
<td>Code: E1</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
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<table>
<thead>
<tr>
<th>· UN &quot;Model Regulation&quot;:</th>
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<tbody>
<tr>
<td>UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III</td>
</tr>
</tbody>
</table>

(Contd. on page 8)
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - 7697-37-2 nitric acid
  - Section 313 (Specific toxic chemical listings):
    - 7697-37-2 nitric acid
    - 13446-18-9 magnesium nitrate hexahydrate
    - 7757-79-1 potassium nitrate
  - TSCA (Toxic Substances Control Act):
    - 7697-37-2 nitric acid
    - 471-34-1 calcium carbonate
    - 7631-99-4 sodium nitrate, containing in the dry state more than 16.3 per cent by weight of nitrogen
    - 7757-79-1 potassium nitrate
    - 12125-02-9 ammonium chloride
    - 7732-18-5 water
  - TSCA new (21st Century Act) (Substances not 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.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency)
      None of the ingredients is listed.
    - TLV (Threshold Limit Value established by ACGIH)
      None of the ingredients is listed.
    - 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
      - ! GHS07

- Signal word Warning
- Hazard statements
  Causes skin irritation.
  Causes serious eye irritation.
Trade name: Custom Standard

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

**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:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Date of preparation / last revision** 03/26/2018 / 1

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

* Data compared to the previous version altered.