1 Identification

- **Product identifier**
- **Trade name:** Custom Standard
- **Part number:** ICUS-1950
- **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**
  - **GHS05 Corrosion**
    Eye Dam. 1 H318 Causes serious eye damage.
  - **GHS07**
    Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - **GHS05**

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - **nitric acid**

- **Hazard statements**
  - Causes skin irritation.
  - Causes serious eye damage.

- **Precautionary statements**
  - Wash thoroughly after handling.
  - Wear protective gloves / eye protection / face protection.
  - If on skin: Wash with plenty of water.

(Contd. on page 2)
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Classification system:
- NFPA ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- HMIS-ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- 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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
<td>4.95%</td>
</tr>
<tr>
<td>87-69-4 (+)-tartaric acid</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

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. Then 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.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  
  Wear protective equipment. Keep unprotected persons away.

- **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).

  Use neutralizing agent.

  Dispose contaminated material as waste according to item 13.

- **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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>Limit Value</td>
<td>Chemical</td>
<td>Limit Value</td>
</tr>
<tr>
<td>7697-37-2 nitric acid</td>
<td>0.16 ppm</td>
<td>7697-37-2 nitric acid</td>
<td>24 ppm</td>
</tr>
<tr>
<td>87-69-4 (+)-tartaric acid</td>
<td>1.6 mg/m³</td>
<td>87-69-4 (+)-tartaric acid</td>
<td>17 mg/m³</td>
</tr>
<tr>
<td>7664-39-3 hydrogen fluoride</td>
<td>1.0 ppm</td>
<td>7664-39-3 hydrogen fluoride</td>
<td>24 ppm</td>
</tr>
<tr>
<td>10377-66-9 manganese dinitrate</td>
<td>9.8 mg/m³</td>
<td>10377-66-9 manganese dinitrate</td>
<td>16 mg/m³</td>
</tr>
<tr>
<td>10026-22-9 cobalt (II) nitrate hexahydrate</td>
<td>0.3 mg/m³</td>
<td>10026-22-9 cobalt (II) nitrate hexahydrate</td>
<td>23 mg/m³</td>
</tr>
<tr>
<td>13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate</td>
<td>1.5 mg/m³</td>
<td>13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate</td>
<td>53 mg/m³</td>
</tr>
<tr>
<td>10196-18-6 zinc(II) nitrate hexahydrate</td>
<td>27 mg/m³</td>
<td>10196-18-6 zinc(II) nitrate hexahydrate</td>
<td>300 mg/m³</td>
</tr>
<tr>
<td>1327-53-3 diarsenic trioxide</td>
<td>0.27 mg/m³</td>
<td>1327-53-3 diarsenic trioxide</td>
<td>0.27 mg/m³</td>
</tr>
<tr>
<td>7446-08-4 selenium dioxide</td>
<td>0.84 mg/m³</td>
<td>7446-08-4 selenium dioxide</td>
<td>0.84 mg/m³</td>
</tr>
<tr>
<td>10042-76-9 strontium nitrate</td>
<td>5.7 mg/m³</td>
<td>10042-76-9 strontium nitrate</td>
<td>5.7 mg/m³</td>
</tr>
<tr>
<td>1313-27-5 molybdenum trioxide</td>
<td>2.3 mg/m³</td>
<td>1313-27-5 molybdenum trioxide</td>
<td>2.3 mg/m³</td>
</tr>
<tr>
<td>7761-88-8 silver nitrate</td>
<td>0.047 mg/m³</td>
<td>7761-88-8 silver nitrate</td>
<td>0.047 mg/m³</td>
</tr>
<tr>
<td>10022-68-1 Nitric acid, cadmium salt, tetrahydrate</td>
<td>0.27 mg/m³</td>
<td>10022-68-1 Nitric acid, cadmium salt, tetrahydrate</td>
<td>0.27 mg/m³</td>
</tr>
<tr>
<td>7440-36-0 antimony</td>
<td>1.5 mg/m³</td>
<td>7440-36-0 antimony</td>
<td>1.5 mg/m³</td>
</tr>
<tr>
<td>10022-31-8 barium nitrate</td>
<td>2.9 mg/m³</td>
<td>10022-31-8 barium nitrate</td>
<td>2.9 mg/m³</td>
</tr>
<tr>
<td>10102-45-1 thallium nitrate</td>
<td>0.078 mg/m³</td>
<td>10102-45-1 thallium nitrate</td>
<td>0.078 mg/m³</td>
</tr>
<tr>
<td>10099-74-8 lead dinitrate</td>
<td>0.24 mg/m³</td>
<td>10099-74-8 lead dinitrate</td>
<td>0.24 mg/m³</td>
</tr>
<tr>
<td>7803-55-6 ammonium trioxovanadate</td>
<td>0.01 mg/m³</td>
<td>7803-55-6 ammonium trioxovanadate</td>
<td>0.01 mg/m³</td>
</tr>
<tr>
<td>554-13-2 lithium carbonate</td>
<td>3.1 mg/m³</td>
<td>554-13-2 lithium carbonate</td>
<td>3.1 mg/m³</td>
</tr>
</tbody>
</table>
Trade name: Custom Standard

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1327-53-3</td>
<td>diarsenic trioxide</td>
<td>3.0 mg/m³</td>
</tr>
<tr>
<td>7446-08-4</td>
<td>selenium dioxide</td>
<td>1.6 mg/m³</td>
</tr>
<tr>
<td>10042-76-9</td>
<td>strontium nitrate</td>
<td>62 mg/m³</td>
</tr>
<tr>
<td>1313-27-5</td>
<td>molybdenum trioxide</td>
<td>43 mg/m³</td>
</tr>
<tr>
<td>7761-88-8</td>
<td>silver nitrate</td>
<td>0.9 mg/m³</td>
</tr>
<tr>
<td>10022-68-1</td>
<td>Nitric acid, cadmium salt, tetrahydrate</td>
<td>2.1 mg/m³</td>
</tr>
<tr>
<td>7440-36-0</td>
<td>antimony</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td>10022-31-8</td>
<td>barium nitrate</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td>10102-45-1</td>
<td>thallium nitrate</td>
<td>4.3 mg/m³</td>
</tr>
<tr>
<td>10099-74-8</td>
<td>lead dinitrate</td>
<td>180 mg/m³</td>
</tr>
<tr>
<td>7803-55-6</td>
<td>ammonium trioxovanadate</td>
<td>0.11 mg/m³</td>
</tr>
<tr>
<td>554-13-2</td>
<td>lithium carbonate</td>
<td>34 mg/m³</td>
</tr>
</tbody>
</table>

- **PAC-3:**

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2</td>
<td>nitric acid</td>
<td>92 ppm</td>
</tr>
<tr>
<td>87-69-4</td>
<td>(+)-tartaric acid</td>
<td>100 mg/m³</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>hydrogen fluoride</td>
<td>44 ppm</td>
</tr>
<tr>
<td>10377-66-9</td>
<td>manganese dinitrate</td>
<td>96 mg/m³</td>
</tr>
<tr>
<td>10026-22-9</td>
<td>cobalt (II) nitrate hexahydrate</td>
<td>140 mg/m³</td>
</tr>
<tr>
<td>13478-00-7</td>
<td>Nitric acid, nickel(2+) salt, hexahydrate</td>
<td>320 mg/m³</td>
</tr>
<tr>
<td>10196-18-6</td>
<td>zinc(II) nitrate hexahydrate</td>
<td>1,800 mg/m³</td>
</tr>
<tr>
<td>1327-53-3</td>
<td>diarsenic trioxide</td>
<td>9.1 mg/m³</td>
</tr>
<tr>
<td>7446-08-4</td>
<td>selenium dioxide</td>
<td>9.5 mg/m³</td>
</tr>
<tr>
<td>10042-76-9</td>
<td>strontium nitrate</td>
<td>370 mg/m³</td>
</tr>
<tr>
<td>1313-27-5</td>
<td>molybdenum trioxide</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>7761-88-8</td>
<td>silver nitrate</td>
<td>5.4 mg/m³</td>
</tr>
<tr>
<td>10022-68-1</td>
<td>Nitric acid, cadmium salt, tetrahydrate</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td>7440-36-0</td>
<td>antimony</td>
<td>80 mg/m³</td>
</tr>
<tr>
<td>10022-31-8</td>
<td>barium nitrate</td>
<td>2,100 mg/m³</td>
</tr>
<tr>
<td>10102-45-1</td>
<td>thallium nitrate</td>
<td>26 mg/m³</td>
</tr>
<tr>
<td>10099-74-8</td>
<td>lead dinitrate</td>
<td>1,100 mg/m³</td>
</tr>
<tr>
<td>7803-55-6</td>
<td>ammonium trioxovanadate</td>
<td>80 mg/m³</td>
</tr>
<tr>
<td>554-13-2</td>
<td>lithium carbonate</td>
<td>210 mg/m³</td>
</tr>
</tbody>
</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.
Trade name: Custom Standard

- 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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>7697-37-2 nitric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 5 mg/m³, 2 ppm</td>
</tr>
<tr>
<td>REL Short-term value: 10 mg/m³, 4 ppm</td>
</tr>
<tr>
<td>Long-term value: 5 mg/m³, 2 ppm</td>
</tr>
<tr>
<td>TLV Short-term value: 10 mg/m³, 4 ppm</td>
</tr>
<tr>
<td>Long-term value: 5.2 mg/m³, 2 ppm</td>
</tr>
</tbody>
</table>

- 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 skin.
      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
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.
    - Boiling point/Boiling range: 100 °C (212 °F)
  - 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 °C (68 °F): 23 hPa (17.3 mm Hg)
  - Density:
    - Not determined.
  - 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:
      - 2.0 %
  - 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.
Trade name: Custom Standard

- **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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50/4 h</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATE (Acute Toxicity Estimate)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>1,354 mg/L (rat)</td>
<td></td>
</tr>
<tr>
<td><strong>Nitric acid</strong></td>
<td>67 mg/L (rat)</td>
<td></td>
</tr>
<tr>
<td><strong>Hydrogen fluoride</strong></td>
<td></td>
<td>1,276 mg/kg (rat)</td>
</tr>
</tbody>
</table>

#### Primary irritant effect:

- **on the skin**: Irritant to skin and mucous membranes.
- **on the eye**: Strong irritant with the danger of severe eye injury.

#### 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)**
  - 10026-22-9 cobalt (II) nitrate hexahydrate 2B
  - 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 1
  - 1327-53-3 diarsenic trioxide 1
  - 7446-08-4 selenium dioxide 3
  - 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 1
  - 10099-74-8 lead dinitrate 2A
  - 543-81-7 acetic acid beryllium salt 1

- **NTP (National Toxicology Program)**
  - 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate K
  - 1327-53-3 diarsenic trioxide K
  - 10022-68-1 Nitric acid, cadmium salt, tetrahydrate K
  - 10099-74-8 lead dinitrate R
  - 543-81-7 acetic acid beryllium salt K

- **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.
Trade name: Custom Standard

- **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 2 (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - Danger to drinking water if even small quantities leak into the ground.
  - 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
- **UN proper shipping name**
  - DOT: Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)
  - IMDG, IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
- **Transport hazard class(es)**
  - DOT
    - **Class:** 8 Corrosive substances
    - **Label:** 8
  - IMDG, IATA
    - **Class:** 8 Corrosive substances
    - **Label:** 8
### Trade name: Custom Standard

<table>
<thead>
<tr>
<th>Packing group</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Warning: Corrosive substances</td>
</tr>
<tr>
<td>Danger code (Kemler):</td>
<td>80</td>
</tr>
<tr>
<td>EMS Number:</td>
<td>F-A,S-B</td>
</tr>
<tr>
<td>Segregation groups</td>
<td>Acids</td>
</tr>
<tr>
<td>Stowage Category</td>
<td>B</td>
</tr>
<tr>
<td>Stowage Code</td>
<td>SW2 Clear of living quarters.</td>
</tr>
</tbody>
</table>

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

### Transport/Additional information:

<table>
<thead>
<tr>
<th>DOT</th>
<th>Quantity limitations On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG</td>
<td>Limited quantities (LQ) 1L Exempted quantities (EQ) Code: E2</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

### UN "Model Regulation":

| UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, II |

### 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 |
| 7664-39-3 hydrogen fluoride |
| 1327-53-3 diarsenic trioxide |

#### Section 313 (Specific toxic chemical listings):

| 7697-37-2 nitric acid |
| 7664-39-3 hydrogen fluoride |
| 7789-02-8 chromium (III) nitrate nonahydrate |
| 10377-66-9 manganese dinitrate |
| 10026-22-9 cobalt (II) nitrate hexahydrate |
| 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate |
| 10031-43-3 cupric nitrate |
| 10196-18-6 zinc(II) nitrate hexahydrate |
| 1327-53-3 diarsenic trioxide |
| 7446-08-4 selenium dioxide |
| 10042-76-9 strontium nitrate |

(Contd. on page 10)
### Trade name: Custom Standard

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1313-27-5</td>
<td>molybdenum trioxide</td>
</tr>
<tr>
<td>7761-88-8</td>
<td>silver nitrate</td>
</tr>
<tr>
<td>10022-68-1</td>
<td>Nitric acid, cadmium salt, tetrahydrate</td>
</tr>
<tr>
<td>7440-36-0</td>
<td>antimony</td>
</tr>
<tr>
<td>10022-31-8</td>
<td>barium nitrate</td>
</tr>
<tr>
<td>10102-45-1</td>
<td>thallium nitrate</td>
</tr>
<tr>
<td>10099-74-8</td>
<td>lead dinitrate</td>
</tr>
<tr>
<td>7803-55-6</td>
<td>ammonium trioxovanadate</td>
</tr>
<tr>
<td>554-13-2</td>
<td>lithium carbonate</td>
</tr>
<tr>
<td>543-81-7</td>
<td>acetic acid beryllium salt</td>
</tr>
</tbody>
</table>

- **TSCA (Toxic Substances Control Act):**
  - 7697-37-2 nitric acid
  - 87-69-4 (+)-tartaric acid
  - 7664-39-3 hydrogen fluoride
  - 10377-66-9 manganese dinitrate
  - 1327-53-3 diarsenic trioxide
  - 7446-08-4 selenium dioxide
  - 10042-76-9 strontium nitrate
  - 1313-27-5 molybdenum trioxide
  - 7761-88-8 silver nitrate
  - 7440-36-0 antimony
  - 10022-31-8 barium nitrate
  - 10102-45-1 thallium nitrate
  - 10099-74-8 lead dinitrate
  - 7803-55-6 ammonium trioxovanadate
  - 554-13-2 lithium carbonate
  - 7732-18-5 water

- **TSCA new (21st Century Act) (Substances not listed)**

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    - 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate
    - 1327-53-3 diarsenic trioxide
    - 10022-68-1 Nitric acid, cadmium salt, tetrahydrate
    - 10099-74-8 lead dinitrate
    - 543-81-7 acetic acid beryllium salt
  - **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:**
    - 1327-53-3 diarsenic trioxide
    - 554-13-2 lithium carbonate

(Contd. on page 11)
### Carcinogenic categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10377-66-9 manganese dinitrate</td>
<td>D</td>
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<tr>
<td>1327-53-3 diarsenic trioxide</td>
<td>A</td>
</tr>
<tr>
<td>7446-08-4 selenium dioxide</td>
<td>D</td>
</tr>
<tr>
<td>10022-31-8 barium nitrate</td>
<td>D, CBD(inh), NL(oral)</td>
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<tr>
<td>10102-45-1 thallium nitrate</td>
<td>II</td>
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<tr>
<td>10099-74-8 lead dinitrate</td>
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</table>

<table>
<thead>
<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
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</thead>
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<tr>
<td>1327-53-3 diarsenic trioxide</td>
<td>A1</td>
</tr>
<tr>
<td>10022-31-8 barium nitrate</td>
<td>A4</td>
</tr>
<tr>
<td>10099-74-8 lead dinitrate</td>
<td>A3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>NIOSH-Ca (National Institute for Occupational Safety and Health)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
<td></td>
</tr>
</tbody>
</table>

#### GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

#### Hazard pictograms

![GHS05](image)

**Signal word** Danger

**Hazard-determining components of labeling:**

- nitric acid

**Hazard statements**

- Causes skin irritation.
- Causes serious eye damage.

**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.
- Immediately call a poison center/doctor.
- Specific treatment (see on this label).
- If skin irritation occurs: 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.

### 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** 01/15/2018 / -

**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
Trade name: Custom Standard

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 Dam. 1: Serious eye damage/eye irritation – Category 1