SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Identifiers**
  Product name: VACUETTE® Urine CCM Tubes

- **Relevant identified uses:**
  Production of diagnostic test tubes

- **Details of the supplier of the safety data sheet:**
  **Company:**
  Greiner Bio-One GmbH
  Bad Haller Strasse 32
  4550 Kremsmünster
  Austria
  Tel: (+43) 7583 6791-1186
  Fax: (+43) 7583 6791-1114
  Email: office@at.gbo.com

- **Emergency Telephone Number:** +43 1 406 43 43

SECTION 2: HAZARDS IDENTIFICATION

- **Classification of the substance or mixture:**
  Classification according to Regulation (EG) Nr. 1272/2008

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>Category</th>
<th>May damage fertility, may damage the unborn child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Category 2</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

H360FD: May damage fertility, may damage the unborn child
H319: Causes serious eye irritation

- **Label elements:**
  Labelling according Regulation (EC) No 1272/2008

  Pictogram:

  ![Pictogram]

  Signal word: Danger

  Hazard statements:
  H360FD: May damage fertility, may damage the unborn child
  H319: Causes serious eye irritation
Precautionary statements:
- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P305+P351+P338: if in eyes: rinse cautiously with water for several minutes, remove contact lenses if present and easy to do, continue rinsing
- P308+P313: if exposed or concerned: get medical advice/attention
- P405: Store locked up
- P501: Dispose of contents/container in accordance with local regulation

- Other hazards:
  none

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- Description: VACUETTE® PET Tube (Polyethyleneterephthalate) with CCM-powder HC2070
- Substances: Mixture containing hazardous components

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No.</th>
<th>EG-No.</th>
<th>m%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Sodium tetraborate        | 1303-96-4 | 215-540-4 | <35 | Repr. 1B; H360FD  
                          |           |           |                  | Eye irrit.. 2; H319 |
| Boric acid                | 10043-35-3| 233-139-2 | <30 | Repr. 1B; H360FD |

Boric acid is on Candidate List of Substances of Very High Concern (SVHC) for Authorization according Regulation (EG) No. 1907/2006 (Article 57c)

- Quantity of substances: < 1% (mass %)
- Exposure limits: N/A

### SECTION 4: FIRST AID MEASURES

- Description of first aid measures:
  - **Skin:** Wash thoroughly with soap and plenty of water, remove contaminated clothing and shoes and wash before reuse; if skin irritation persist consult a physician
  - **Eyes:** Rinse thoroughly with plenty of water for at least 10 minutes, remove contact lenses if present and easy to do, continue rinsing, get medical advice
  - **Inhalation:** Remove to fresh air. If breathing is difficult, give artificial respiration, get medical attention
  - **Ingestion:** Never give anything by mouth to an unconscious person; rinse mouth with water; do not trigger vomiting without medical order; if discomfort persists consult a physician.

- Most important symptoms and effects, both acute and delayed:
  See section 2 and 11
**SECTION 5: FIRE-FIGHTING MEASURES**

- **Extinguishing media:**
  Suitable extinguishing media:
  - Carbon dioxide, dry chemical, water spray or alcohol-resistant foam

- **Special hazards arising from the substance or mixture**
  Fire gases: Boran/Boroxide
  In case of fire harmful gases and decomposition products can be evolved! Do not breathe fire gases!

- **Advice for firefighters:**
  Firefighting measures should comply with any environmental aspects; wear self-contained breathing apparatus for firefighting if necessary; condense released fumes with water spray

- **Further information:**
  No data available

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

- **Personal precautions, protective equipment and emergency procedures:**
  Use personal protective equipment (see section 8); ensure appropriate exhaust ventilation; provide adequate supply with fresh air; do not breathe fumes, vapors, mist or spray; avoid contact with eyes and skin

- **Environmental precautions:**
  Prevent further leakage or spillage if safe to do so; do not let product enter drains; discharge into environment must be avoided

- **Methods and material for containment and for cleaning up:**
  Pick up and arrange disposal without creating dust, sweep up and shovel, keep in suitable, closed containers for disposal.

- **Reference for other sections**
  - Hazardous fire gases see section 5
  - Personal protective equipment see section 8
  - Incompatible materials see section 10
  - Disposal see section 13

**SECTION 7: HANDLING AND STORAGE**

- **Precaution for safe handling:**
  Take off contaminated clothing and shoes and clean before reuse; wash hands and face thoroughly before breaks and at the end of a working day, apply precautionary skin protection.

  Avoid contact with eyes and skin as well as formation of fume, vapors, mist and spray; Do not breathe fume, vapors, mist and spray; ensure appropriate exhaust ventilation.

  Information regarding personal protective equipment see section 8, concerning protective measure see section 2.
- Conditions for safe storage, including any incompatibilities:
  Store in a cool, dry and proper ventilated place; Keep container tightly closed.

- Specific end use(s):
  Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- Control parameters
  o Mixture contains no components with workplace control parameters

- Exposure controls
  o Appropriate engineering controls:
    Handle in accordance with good industrial hygiene (see section 7) and safety practice; wash hands before breaks and at the end of a working day. Ventilation and aspiration, technical measures and the application of proper procedures are preferential to the use of personal protective equipment.

  o Personal protective equipment:
    Eye/face protection:
    Safety glasses with side-shields in accordance with EN 166; use equipment tested and approved under appropriate standards, e.g. EN 166

    Skin protection:
    Handle with gloves; gloves must be inspected prior to use; use proper gloves removal technique (without touching glove’s outer surface) to avoid skin contact; dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice; wash and dry hands. Selected protective gloves have to satisfy the specification on EN 374 and Directive 89/686/EEC based on it.
    Indication for a material’s range:
    Material: Nitrile rubber
    Minimum layer thickness: >0.11 mm
    Break through time: >480 min

    Body protection:
    Impervious clothing or complete suit protecting against chemicals; Type of protective equipment must be selected according to concentration and amount of dangerous substance at the specific workplace.

    Respiratory Protection:
    Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with P3 (EN 143) respirator cartridges as a backup to engineering controls

    Hygiene measures:
    Do not eat, drink or smoke when using the product; Wash hands thoroughly after use, before breaks and at the end of a working day, apply precautionary skin protection; Keep away from food, drink and animal feedstuffs; Take off contaminated clothing and shoes and clean before reuse.

    Control of environmental exposure:
    Prevent further leakage or spillage if safe to do so; do not let product enter drains; discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance:</th>
<th>Form: solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>odorless</td>
</tr>
<tr>
<td>pH-Value:</td>
<td>no data available</td>
</tr>
</tbody>
</table>
Melting point-/freezing point: no data available
Initial boiling point and boiling range: no data available
Flashpoint: no data available
Evaporation rate: no data available
Flammability: no data available
Upper/lower flammability or explosive limits: no data available
Vapor pressure: no data available
Vapor density: no data available
Relative density: no data available
Water solubility: no data available
Partition coefficient n-octanol/water: no data available
Auto ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: no data available
Explosive properties: no data available
Oxidizing properties: no data available

SECTION 10: STABILITY AND REACTIVITY

- Reactivity: No data available,
- Chemical stability: Stable under recommended storage conditions
- Possibility of hazardous reactions No data available
- Conditions to avoid No data available
- Incompatible materials Potassium, Acid anhydrides
- Hazardous decomposition products:
  - In event of fire: Borane/Boroxides, Sodium oxides (see section 5).
  - Other decomposition products: no data available

SECTION 11: TOXICOLOGICAL INFORMATION

- Information on toxicological effects
  - Acute Toxicity
    
    | Sodium tetraborate | LD₅₀ rat oral: 2400 – 2600 mg/kg |  
    |                   | LD₅₀ rabbit dermal: > 2000 mg/kg |
    | Boric acid        | LD₅₀ rat oral: 2660 mg/kg |

  - Skin corrosion/irritation:
    | Sodium tetraborate | skin rabbit: no skin irritation |
    | Boric acid         | no data available              |

  - Serious eye damage / eye irritation:
    | Sodium tetraborate | eye rabbit: moderate eye irritation |
    | Boric acid         | no data available               |
Respiratory or skin sensitization:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium tetraborate</td>
<td>Guinea pig: no skin sensitization</td>
</tr>
<tr>
<td>Boric acid</td>
<td>no data available</td>
</tr>
</tbody>
</table>

Germ cell mutagenicity: no data available
Carcinogenicity: no data available
Reproductive toxicity: fetotoxicity, presumed human reproductive toxicant
Specific target organ toxicity – single exposure: no data available
Specific target organ toxicity – repeated exposure: no data available
Aspiration hazard: no data available
Additional information:
Toxicity is reported for borate in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions in the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has been reported to occur in infants from less than 5 g and in adults from 5 – 20 g.
Liver – irregularities – based on human evidence

**SECTION 12: ECOLOGICAL INFORMATION**

- **Toxicity:**
  Data are related to the mentioned constituent:

**Boric acid:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC₅₀ Ptychocheilus lucius</th>
<th>LC₅₀ Lepomis macrochirus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>279 mg/l / 96 h</td>
<td>&gt;1021 mg/l / 96 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia</th>
<th>LC₅₀ Daphnia magna</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53.2 mg/l / 21 d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>EC₅₀ Daphnia magna</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>133 mg/l / 48 d</td>
</tr>
</tbody>
</table>

**Sodium tetraborate:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>NOEC Danio rerio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.4 mg/l / 34 s</td>
</tr>
</tbody>
</table>

- **Persistence and degradability:**
  The methods for determining the biological degradability are not applicable to inorganic substances

- **Bioaccumulative potential:**
  Due to the distribution coefficient n-octanol/water accumulation in organisms is not expected

- **Mobility in soil:** no data available

- **Results of PBT and vPvB assessment:**
  PBT/vPvB assessment is not available as chemical safety assessment has not been conducted

- **Other adverse effects:**
  - Sodium tetraborate: Harmful to aquatic life
  - Boric acid: no data available
SECTION 13: DISPOSAL CONSIDERATION

- Waste treatment methods
  - **Product**
    Dissolve or mix material with a combustible solvent and burn in an incinerator equipped with an after burner and scrubber. Offer surplus and non recyclable solution to a licensed disposal company
  - **Contaminated packaging**
    Dispose of as unused product

SECTION 14: TRANSPORT INFORMATION

- **UN number:** None
- **UN proper shipping name:** Not dangerous goods
- **Transport hazards:** none
- **Packaging group:** none
- **Environmental hazards:** none
- **Special precaution for user:** No data available

SECTION 15: REGULATORY INFORMATION

- **Safety, health and environmental regulation/legislation specific for substance or mixture**
  This safety data sheet complies with the requirements of Regulation (EC) no. 1907/2006
- **Authorisations and/or restrictions on use**
  - Sodium tetraborate
    REACH – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
    REACH – candidate List of Substances of Very High Concern for Authorization (Article 59)
  - Boric acid
    Candidate List of Substances of Very High Concern for Authorization (Article 57c)
- **Chemical safety assessment**
  For this product a chemical safety assessment was not carried out

SECTION 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate. However, neither Greiner Bio-One nor any of its subcontractors or suppliers assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.