1 Identification of substance:

- **Product details:**
  - **Trade name:** TETRA BETTA SAFE
  - **Article number:** 823.501/ USA 2

- **Manufacturer/Supplier:**
  - Tetra
  - 3001 Commerce Street
  - Blacksburg, VA 24060-6671
  - USA

- **Additional information:**
  - Tetra (USA)
  - Tel.: (540)951-5508
  - **Emergency information:**
    - Emergency Number Berlin
    - +49 (0)30 19240

2 Composition/Data on components:

- **Chemical characterization**
  - **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**
  - 6381-92-6 ethylenediaminetetraacetic acid disodium salt
    - **Xn:** R 22
    - 2.5-10%
  - 30-00-0 formaldehyde
    - **T:** R 23/24/25-34-40-43
    - ≤ 2.3%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:** not applicable

- **Information pertaining to particular dangers for man and environment**
  - The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system**
  - The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- **NFPA ratings (scale 0-4)**
  - Health = 0
  - Fire = 0
  - Reactivity = 0

4 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.

(Cont'd on page 2)
5 Fire fighting measures

- Suitable extinguishing agents
  CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Protective equipment: No special measures required.

6 Accidental release measures

- Person-related safety precautions: Not required.
- Measures for environmental protection:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Measures for cleaning/collection:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Additional information: No dangerous substances are released.

7 Handling and storage

- Handling
  Information for safe handling: No special measures required.
  Information about protection against explosions and fires: No special measures required.
- 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.

8 Exposure controls and personal protection

- Additional information about design of technical systems: No further data: see item 7.

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0 formaldehyde (≤ 2.5%)</td>
</tr>
<tr>
<td>PEL Short-term value: 2 ppm</td>
</tr>
<tr>
<td>Long-term value: 0.75 ppm</td>
</tr>
<tr>
<td>see 29 CFR 1910.1048</td>
</tr>
<tr>
<td>REL Short-term value: C 0.1* ppm</td>
</tr>
<tr>
<td>Long-term value: 0.016 ppm</td>
</tr>
<tr>
<td>*15-min</td>
</tr>
<tr>
<td>TLV Short-term value: C 0.37 mg/m³; C 0.3 ppm</td>
</tr>
<tr>
<td>SEN</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- 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.

(Contd. on page 3)
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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

### 9 Physical and chemical properties:

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong> Fluid</td>
</tr>
<tr>
<td><strong>Color:</strong> Colorless</td>
</tr>
<tr>
<td><strong>Odor:</strong> Characteristic</td>
</tr>
</tbody>
</table>

- **Change in condition**
  - **Melting point/Melting range:** undetermined
  - **Boiling point/Boiling range:** undetermined

- **Flash point:** Not applicable

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapor pressure at 20°C (68°F):** 23.0 hPa (17 mm Hg)

- **Density at 20°C (68°F):** 1.10 g/cm³

- **Solubility in / Miscibility with Water:** Fully miscible

- **pH-value at 20°C (68°F):** 8.5

- **Solvent content:**
  - Organic solvents: 0.1 %
  - Water: 81.1 %

- **Solids content:** 18.2 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
  - No decomposition if used according to specifications.

- **Dangerous reactions:** No dangerous reactions known

- **Dangerous products of decomposition:** No dangerous decomposition products known

### 11 Toxicological information

- **Acute toxicity:**
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/17/2005
Reviewed on 08/17/2005

Trade name: TETRA BETTA SAFE

(Contd. of page 3)

- Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
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.

12 Ecological information:

- General notes:
  Water hazard class 1 (German Regulation) (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.

13 Disposal considerations

- Product:
  - Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
  - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- DOT regulations:
- Hazard class:

- Land transport ADR/RID (cross-border)

- ADR/RID class:

- Maritime transport IMDG:
  - IMDG Class:
  - Marine pollutant: No

- Air transport ICAO-TI and IATA-DGR:
  ICAO/IATA Class:

15 Regulations

- Cancerogenity categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - IARC (International Agency for Research on Cancer)
    9003-39-8 Kollidon
    50-00-0 formaldehyde

(Contd. on page 5)
Trade name: TETRA BETTA SAFE

- NTP (National Toxicology Program)
  30-00-0 formaldehyde
  R

- TLV (Threshold Limit Value established by ACGIH)
  None of the ingredients is listed.

- MAK (German Maximum Workplace Concentration)
  None of the ingredients is listed.

- NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)
  None of the ingredients is listed.

Markings according to EU guidelines:
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

National regulations

Technical instructions (air):

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wasser</td>
<td>81.1</td>
</tr>
<tr>
<td>1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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 MSDS:
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Legal Department

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