1 Identification

- Product identifier
- Trade name: TAE Buffer
- Article number: 01-870-1
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Biological Industries Israel Beit Haemek Ltd.
  BEIT HAEMEK 25115
  ISRAEL
  michalb@bioind.com
- Information department: Product safety department.
- Emergency telephone number: During normal opening times: +972/4/9962467

2 Hazard(s) identification

- Classification of the substance or mixture
  GHS08 Health hazard

  STOT RE 2  H373  May cause damage to organs through prolonged or repeated exposure.

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

  GHS08

- Signal word Warning

- Hazard-determining components of labeling:
  Ethylenediaminetetraacetic acid disodium salt dihydrate

- Hazard statements
  May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Get medical advice/attention if you feel unwell.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
- NFPA ratings (scale 0 - 4)
  Health = 0
  Fire = 0
  Reactivity = 0

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· HMIS-ratings (scale 0 - 4)
  - Health = 0
  - 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:
  - 64-19-7 acetic acid <6%
  - 6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate <2%

4 First-aid measures

· Description of first aid measures
  - 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: Avoid formation of dust.
· Environmental precautions: No special measures required.
· Methods and material for containment and cleaning up: No special measures required.
· 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.

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### Protective Action Criteria for Chemicals

#### PAC-1:
- 77-86-1 trometamol 18 mg/m³
- 64-19-7 acetic acid 5 ppm
- 6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate 30 mg/m³
- 1310-73-2 sodium hydroxide 0.5 mg/m³

#### PAC-2:
- 77-86-1 trometamol 190 mg/m³
- 64-19-7 acetic acid 35 ppm
- 6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate 330 mg/m³
- 1310-73-2 sodium hydroxide 5 mg/m³

#### PAC-3:
- 77-86-1 trometamol 1,200 mg/m³
- 64-19-7 acetic acid 250 ppm
- 6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate 2,000 mg/m³
- 1310-73-2 sodium hydroxide 50 mg/m³

### Handling and storage

#### Handling:
- **Precautions for safe handling** Prevent formation of dust.
- **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:** Ambient temperature
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Protect from heat and direct sunlight.

#### Specific end use(s)
No further relevant information available.

### 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.

#### 64-19-7 acetic acid
- **PEL** Long-term value: 25 mg/m³, 10 ppm
- **REL** Short-term value: 37 mg/m³, 15 ppm
- **TLV** Short-term value: 37 mg/m³, 15 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: Wash hands before breaks and at the end of work.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
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.
General protective and hygienic measures:

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.

Eye protection:
Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information:
Form: Liquid
Color: Transparent
Odor: Characteristic
Odor threshold: Not determined.

pH-value at 20 °C (68 °F): 8.3

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.

Ignition temperature:
485 °C (905 °F)

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)
### 46.0.19

- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: <6 %
  - Water: >60 %
  - VOC content: <6 %
  - 60.0 g/l

- **Solids content:** <1 %

- **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:**

- **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.
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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:** Generally not hazardous for water

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, ADN, IMDG, IATA not regulated
- **UN proper shipping name**
  - DOT, ADN, IMDG, IATA not regulated
- **Transport hazard class(es)**
  - DOT, ADN, IMDG, IATA Class not regulated
- **Packing group**
  - DOT, IMDG, IATA not regulated
- **Environmental hazards:**
  - **Marine pollutant:** No
- **Special precautions for user**
  - Not applicable.
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
  - Not applicable.
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- **UN "Model Regulation":** not regulated

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**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):**
  - 77-86-1 trometamol
  - 64-19-7 acetic acid
  - 1310-73-2 sodium hydroxide
  - 7732-18-5 water, distilled, conductivity or of similar purity

- **TSCA new (21st Century Act) (Substances not listed)**
  - 6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate

- **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**
  
  GHS08

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- **Signal word** Warning

- **Hazard-determining components of labeling:**
  Ethylenediaminetetraacetic acid disodium salt dihydrate

- **Hazard statements**
  May cause damage to organs through prolonged or repeated exposure.

- **Precautionary statements**
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Get medical advice/attention if you feel unwell.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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:** Product safety department.
- **Contact:** Ms. BADICHI GITLIN
- **Date of preparation / last revision 03/28/2018 / -**
- **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
  - 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
  - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2