1. PRODUCT AND COMPANY IDENTIFICATION

Product name 10xTBE
Product Number TBE
Brand Bioland Scientific LLC
Company Bioland Scientific LLC
Telephone 1-562-377-2668
Fax 1-562-733-6008
Emergency Phone # 1-562-377-2668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
Description: Solution, consisting of the following components.

<table>
<thead>
<tr>
<th>Components</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>water</td>
</tr>
<tr>
<td>77-86-1</td>
<td>trometamol</td>
</tr>
<tr>
<td>10043-35-3</td>
<td>boric acid</td>
</tr>
</tbody>
</table>

Other components:
Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.
Information concerning particular hazards for human and environment:
The product does not have to be labeled due to the calculation procedure of international guidelines.
Classification system:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
Label elements
Labelling according to EU guidelines:
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.
Classification system:
NFPA ratings (scale 0 - 4)

Health = 0
Fire = 0
Reactivity = 0

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.

4. FIRST AID MEASURES

Description of 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.
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:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
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:
Dilute with plenty of water.
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).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. HANDLING AND STORAGE
Handling:
Precautions for safe handling No special measures required.
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: None.
Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION
Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10043-35-3 boric acid</td>
</tr>
<tr>
<td>TLV  Short-term value: 6 l</td>
</tr>
<tr>
<td>Long-term value: 2 l</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:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.

Protection of hands:
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
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Solution</td>
</tr>
<tr>
<td>Color: Colorless</td>
</tr>
<tr>
<td>Odor: Odorless</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value at 20 °C (68 °F): 8.3</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Undetermined.</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Auto igniting: Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapor pressure: Not determined.</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F): 1.06 g/cm³ (8.846 lbs/gal)</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not determined.</td>
</tr>
<tr>
<td>Evaporation rate: Not determined.</td>
</tr>
</tbody>
</table>
| Solubility in / Miscibility with 
  Water: Fully miscible.                              |
| Partition coefficient (n-octanol/water): Not determined. |
| Viscosity:                                           |
| Dynamic: Not determined.                             |
| Kinematic: Not determined.                           |
| Other information available.                         |
| No further relevant information                      |
10. STABILITY AND REACTIVITY
Reactivity
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:

<table>
<thead>
<tr>
<th>LD/LC50 values that are relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10043-35-3 boric acid</td>
</tr>
<tr>
<td>Oral LD50 2660 mg/kg (rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations.
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.
Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

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:
Water hazard class 2 (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
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: 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. TRANSPORTATION INFORMATION

| UN-Number | DOT, ADR, ADN, IMDG, IATA | Void |
| UN proper shipping name | DOT, ADR, ADN, IMDG, IATA | Void |
| Transport hazard class(es) | DOT, ADR, ADN, IMDG, IATA Class | Void |
| Packing group | DOT, ADR, IMDG, IATA | Void |
| Environmental hazards: | Marine pollutant: | No |
| Special precautions for user | Not applicable. |
| Transport in bulk according to | Not applicable. |
| MARPOL73/78 and the IBC Code | II of |

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):
All ingredients are 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.
Cancerogenity categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10043-35-3 boric acid [A4]</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

**Product related hazard information:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16. OTHER INFORMATION

**Disclaimer:**

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