1 Identification

- **Product identifier**
  - **Trade name:** Sodium Tetraborate
    Electrolyte Solution
  - **Article number:** SYN023

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Aqua Solutions, Inc.
    6913 Highway 225
    DEER PARK, TX 77536
    USA
    800-256-2586
  - **Information department:**
    Technical Coordinator
    Sherman Nelson sherman@aquasolutions.org
  - **Emergency telephone number:**
    Chemtrec: 800-424-9300
    Canutec: 613-996-6666

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS06 Skull and crossbones
  - Acute Tox. 2 H330 Fatal if inhaled.

- GHS08 Health hazard
  - Repr. 1 H360 May damage fertility or the unborn child.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS06
    - GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - Sodium Borate Decahydrate

- **Hazard statements**
  - Fatal if inhaled.
  - May damage fertility or the unborn child.

- **Precautionary statements**
  - Obtain special instructions before use.
  - Do not handle until all safety precautions have been read and understood.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - Use only outdoors or in a well-ventilated area.
  - Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)
Trade name: Sodium Tetraborate
Electrolyte Solution

[In case of inadequate ventilation] wear respiratory protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
Immediately call a poison center/doctor.
Specific treatment is urgent (see on this label).
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
  · NFPA ratings (scale 0 - 4)
    Health = 1
    Fire = 0
    Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  HEALTH
  Health = 1
  FIRE
  Fire = 0
  REACTIVITY
  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:
  CAS: 1303-96-4 Sodium Borate Decahydrate 8.019%

· Table of Nonhazardous Ingredients
  CAS: 7732-18-5 Water 91.9809%

4 First-aid measures

· Description of first aid measures
· General information:
  Immediately remove any clothing soiled by the product.
  Remove breathing apparatus only after contaminated clothing have been completely removed.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
· After inhalation:
  Supply fresh air or oxygen; call for doctor.
  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.
Trade name: Sodium Tetraborate
Electrolyte Solution

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: Mouth respiratory protective device.

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).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- 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
  - PAC-1:
    - CAS: 1303-96-4 Sodium Borate Decahydrate
    - 6 mg/m³
  - PAC-2:
    - CAS: 1303-96-4 Sodium Borate Decahydrate
    - 190 mg/m³
  - PAC-3:
    - CAS: 1303-96-4 Sodium Borate Decahydrate
    - 1,100 mg/m³

7 Handling and storage

- Handling:
  - Precautions for safe handling
    - Ensure good ventilation/exhaustion at the workplace.
    - Open and handle receptacle with care.
  - Information about protection against explosions and fires: Keep respiratory protective device available.
- 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.
  - 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

<table>
<thead>
<tr>
<th>Component with limit values that require monitoring at the workplace:</th>
<th>CAS: 1303-96-4 Sodium Borate Decahydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL Long-term value: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TLV Short-term value: 6* mg/m³</td>
<td></td>
</tr>
<tr>
<td>Long-term value: 2* mg/m³</td>
<td></td>
</tr>
<tr>
<td>*as inhalable fraction</td>
<td></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.
  Store protective clothing separately.

· 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.
  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: Goggles recommended during refilling.

· Body protection: Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:
  Form: Liquid
  Color: Clear
  Odor: Odorless
  Odor threshold: Not determined.

· pH-value: Not determined.

· Change in condition
  Melting point/Melting range: Undetermined.
### 4. Physical and Chemical Properties

- **Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not determined.
- **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 at 20 °C (68 °F):** 1.03502 g/cm³ (8.63724 lbs/gal)
  - **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:**
  - **Water:** 92.0 %
  - **VOC content:** 0.00 %
  - **Solids content:** 8.0 %
- **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.
- **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:
  - LD/LC50 values that are relevant for classification:
    | ATE (Acute Toxicity Estimate) |
    | Dermal | LD50 | 13,717 mg/kg |
    | Inhalative | LC50/4 h | 0.62 mg/l |
  - CAS: 1303-96-4 Sodium Borate Decahydrate
    | Dermal | LD50 | 1,100 mg/kg (ATE) |
    | Inhalative | LC50/4 h | 0.05 mg/l (ATE) |

- 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 shows the following dangers according to internally approved calculation methods for preparations:
    - Toxic
    - Very toxic

- 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.
  - 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:
    - Water hazard class 1 (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.
  - 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.
  - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA UN3287

- UN proper shipping name
  - DOT Toxic liquid, inorganic, n.o.s.
  - IMDG, IATA TOXIC LIQUID, INORGANIC, N.O.S.

- Transport hazard class(es)
  - DOT
    - Class 6.1 Toxic substances
    - Label 6.1
  - IMDG, IATA
    - Class 6.1 Toxic substances
    - Label 6.1

- Packing group
  - DOT, IMDG, IATA II

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Warning: Toxic substances

- Danger code (Kemler): 60

- EMS Number: F-A,S-A

- Stowage Category B

- Stowage Code SW2 Clear of living quarters.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
Trade name: Sodium Tetraborate
Electrolyte Solution

- Transport/Additional information:
  - DOT
  - Quantity limitations
    On passenger aircraft/rail: 5 L
    On cargo aircraft only: 60 L

- IMDG
  - Limited quantities (LQ) 100 ml
  - Excepted quantities (EQ)
    - Code: E4
      Maximum net quantity per inner packaging: 1 ml
      Maximum net quantity per outer packaging: 500 ml

- UN "Model Regulation": UN 3287 TOXIC LIQUID, INORGANIC, N.O.S., 6.1, II

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):
  - Sodium Borate Decahydrate
  - Water

- 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)
    - CAS: 1303-96-4 Sodium Borate Decahydrate I (oral)
  - TLV (Threshold Limit Value established by ACGIH)
    - CAS: 1303-96-4 Sodium Borate Decahydrate A4
  - 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).
Trade name: Sodium Tetraborate
Electrolyte Solution

· Hazard pictograms

GHS06  GHS08

· Signal word Danger

· Hazard-determining components of labeling:
  Sodium Borate Decahydrate

· Hazard statements
  Fatal if inhaled.
  May damage fertility or the unborn child.

· Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  [In case of inadequate ventilation] wear respiratory protection.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF exposed or concerned: Get medical advice/attention.
  Immediately call a poison center/doctor.
  Specific treatment is urgent (see on this label).
  Store in a well-ventilated place. Keep container tightly closed.
  Store locked up.
  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: Environment protection department.

· Contact:

· Date of preparation / last revision
  01-08-2018: review SDS for accuracy. STN
  Creation date for SDS 01-20-2015. STN
  01/08/2018 / -

· 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)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
Trade name: Sodium Tetraborate
Electrolyte Solution

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
Acute Tox. 2: Acute toxicity – Category 2
Repr. 1: Reproductive toxicity – Category 1