**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### 1.1. Product identifier

**Product form**: Mixture  
**Product name**: BLUE THUNDER  
**CAS No**: 1310-73-2  
**Product code**: 2011-Q

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

### 1.3. Details of the supplier of the safety data sheet

BETA TECHNOLOGY, INC.  
P.O. Box 218686  
HOUSTON, TX 77218-8686  
T 281-647-9700 - F 281-647-9790

### 1.4. Emergency telephone number

Emergency number : INFOTRAC  800-535-5053

**SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

**GHS-US classification**

<table>
<thead>
<tr>
<th>Skin Corr.</th>
<th>Eye Dam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>1</td>
</tr>
<tr>
<td>H314</td>
<td>H318</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

### 2.2. Label elements

**GHS-US labelling**

- **Hazard pictograms (GHS-US)**
  - [Image]

- **Signal word (GHS-US)**: Danger

- **Hazard statements (GHS-US)**:
  - Causes severe skin burns and eye damage
  - Causes serious eye damage

- **Precautionary statements (GHS-US)**:
  - Do not breathe dust, fume, vapours
  - Wash hands thoroughly after handling
  - Wear eye protection, protective gloves
  - If swallowed: rinse mouth. Do NOT induce vomiting
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
  - If inhaled: Remove person to fresh air and keep comfortable for breathing
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - Immediately call a doctor
  - Specific treatment (see First Aid measures on this label)
  - Wash contaminated clothing before reuse
  - Store locked up
  - Dispose of contents/container to an approved waste disposal plant

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

Not applicable
SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| Caustic Soda    | (CAS No) 1310-73-2 | 96.04 - 97.02 | Met. Corr. 1, H290
|                 |                    |       | Skin Corr. 1A, H314           |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact: Caustic burns/corrosion of the skin.
- Symptoms/injuries after eye contact: Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard: Not flammable.
- Explosion hazard: No data available on direct explosion hazard.
- Reactivity: Corrosive vapours.

5.3. Advice for firefighters

- Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment: Equip cleanup crew with proper protection.
- Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up: On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust, fume, vapours. Avoid contact during pregnancy/while nursing.

Hygiene measures: Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from Heat sources. Keep container closed when not in use.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Product</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE THUNDER (1310-73-2)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Caustic Soda (1310-73-2)</td>
<td>ACGIH Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Remark (ACGIH)</td>
<td>URT, eye, &amp; skin irr</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Personal protective equipment: Safety glasses. Gloves.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask.

Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>Blue</td>
</tr>
<tr>
<td>Odour</td>
<td>lemon-like</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**Oxidising properties**: No data available

**Vapour pressure**: No data available

**Relative density**: No data available

**Relative vapour density at 20 °C**: No data available

**Solubility**: No data available

**Log Pow**: No data available

**Log Kow**: No data available

**Auto-ignition temperature**: No data available

**Decomposition temperature**: No data available

**Viscosity**: No data available

**Viscosity, kinematic**: No data available

**Viscosity, dynamic**: No data available

**9.2. Other information**

No additional information available

---

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Corrosive vapours.

**10.2. Chemical stability**

Not established.

**10.3. Possibility of hazardous reactions**

Not established.

**10.4. Conditions to avoid**

Direct sunlight. Extremely high or low temperatures.

**10.5. Incompatible materials**

Strong acids. Strong bases.

**10.6. Hazardous decomposition products**


---

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**: Not classified

**Skin corrosion/irritation**: Causes severe skin burns and eye damage.

**Serious eye damage/irritation**: Causes serious eye damage.

**Respiratory or skin sensitisation**: Not classified

**Germ cell mutagenicity**: Not classified

**Carcinogenicity**: Not classified

**Reproductive toxicity**: Not classified

**Specific target organ toxicity (single exposure)**: Not classified

**Specific target organ toxicity (repeated exposure)**: Not classified

**Aspiration hazard**: Not classified

**Potential adverse human health effects and symptoms**: Based on available data, the classification criteria are not met.

**Symptoms/injuries after skin contact**: Caustic burns/corrosion of the skin.

**Symptoms/injuries after eye contact**: Causes serious eye damage.

---

**SECTION 12: Ecological information**

**12.1. Toxicity**

No additional information available
12.2. Persistence and degradability

**BLUE THUNDER (1310-73-2)**
Persistence and degradability  
Not established.

**Caustic Soda (1310-73-2)**
Persistence and degradability  
Not established.

12.3. Bioaccumulative potential

**BLUE THUNDER (1310-73-2)**
Bioaccumulative potential  
Not established.

**Caustic Soda (1310-73-2)**
Bioaccumulative potential  
Not established.

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on the global warming  
No known ecological damage caused by this product.

Other information  
Avoid release to the environment.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods
Waste disposal recommendations  
Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to an approved waste disposal plant.

Ecology - waste materials  
Avoid release to the environment.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**
In accordance with DOT
Not regulated for transport

**Additional information**
Other information  
No supplementary information available.

**ADR**
No additional information available

**Transport by sea**
No additional information available

**Air transport**
No additional information available

**SECTION 15: Regulatory information**

15.1. US Federal regulations

**BLUE THUNDER (1310-73-2)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Not listed on the United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)  
1000 lb

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

<table>
<thead>
<tr>
<th>ALUMINUM CHIPS</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - 2</td>
</tr>
</tbody>
</table>

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
BLUE THUNDER
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Caustic Soda (1310-73-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed on the United States SARA Section 313</td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists)</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National regulations
No additional information available

15.3. US State regulations

<table>
<thead>
<tr>
<th>BLUE THUNDER(1310-73-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State or local regulations</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

Caustic Soda (1310-73-2)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 05/06/2015
Other information : None.

Full text of H-phrases:

| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Met. Corr. 1 | Corrosive to metals, Category 1 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| H290 | May be corrosive to metals |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal Protection : B
B - Safety glasses, Gloves

SDS US (GHS HazCom 2012)

No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material.