Triethyloxonium tetrafluoroborate (cas 368-39-8) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product</th>
<th>Triethyloxonium tetrafluoroborate solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>176230</td>
</tr>
<tr>
<td>Brand</td>
<td></td>
</tr>
</tbody>
</table>

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

Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Skin corrosion (Category 1B)
- Carcinogenicity (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
- Causes burns. Limited evidence of a carcinogenic effect. Reacts violently with water.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Signal word</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Danger</td>
<td>H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H351 Suspected of causing cancer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Precautionary statement(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P310 Immediately call a POISON CENTER or doctor/ physician.</td>
</tr>
</tbody>
</table>

Supplemental Hazard information (EU)
- EUH014 Reacts violently with water.


<table>
<thead>
<tr>
<th>R-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R14 Reacts violently with water.</td>
</tr>
<tr>
<td>R34 Causes burns.</td>
</tr>
<tr>
<td>R40 Limited evidence of a carcinogenic effect.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
<tr>
<td>S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.</td>
</tr>
<tr>
<td>S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</td>
</tr>
</tbody>
</table>

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>Carc. 2; H351</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated... Pulmonary edema. Effects may be delayed., Drowsiness. Increased liver enzymes., Weakness. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Dry powder

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas, Hydrogen fluoride, Borane/boron oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never allow product to get in contact with water during storage.

Recommended storage temperature: 2 - 8 °C
7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals, Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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>a) Appearance</td>
<td>Form: liquid</td>
</tr>
<tr>
<td>b) Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>no data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>no data available</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>no data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1,328 g/mL at 25 °C</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>p) Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>no data available</td>
</tr>
</tbody>
</table>
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
no data available
10.2 Chemical stability
no data available
10.3 Possibility of hazardous reactions
Reacts violently with water.
10.4 Conditions to avoid
Exposure to moisture.
10.5 Incompatible materials
Bases, Alkali metals, Strong acids and strong bases, Strong oxidizing agents, Amines, Vinyl compounds, Aluminum, Magnesium
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
Acute toxicity
no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Methylene chloride)
Reproductive toxicity
no data available
Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available
Potential health effects
Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion Harmful if swallowed. Causes burns.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.

12. ECOLOGICAL INFORMATION
12.1 Toxicity
no data available
12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 3265  IMDG: 3265  IATA: 3265

14.2 UN proper shipping name
ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Triethyloxonium tetrafluoroborate(1-))
IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Triethyloxonium tetrafluoroborate(1-))
IATA: Corrosive liquid, acidic, organic, n.o.s. (Triethyloxonium tetrafluoroborate(1-))

14.3 Transport hazard class(es)
ADR/RID: 8  IMDG: II  IATA: 8

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Carc.  Carcinogenicity
EUH014  Reacts violently with water.
H314  Causes severe skin burns and eye damage.
H351  Suspected of causing cancer.
Skin Corr.  Skin corrosion
C  Corrosive
R14  Reacts violently with water.
R34  Causes burns.
R40  Limited evidence of a carcinogenic effect.
Xn  Harmful

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.