



Revision date: 09.17.2015  
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**Trade name:** TRICAINE-S

### SECTION 1: Identification

**Product identifier:** TRICAINE-S  
**Synonyms:** None available  
**Product Code Number:** None available  
**SDS number:** WC005  
**Recommended use:** Tricaine-S is intended for the temporary immobilization of fish, amphibians, and other aquatic, cold-blooded animals. It has been recognized as a valuable tool for the proper handling of these animals during manual spawning (fish stripping), weighing, measuring, marking, surgical operations, transport, photography, and research.  
**Recommended restrictions:** None known

**Manufacturer/Importer/Supplier/Distributor information:**  
**Company Name:** Syndel USA  
**Company Address:** 1441 W. Smith Road  
Ferndale, WA 98248  
**Company Telephone:** Office hours (Mon – Fri)  
8:30 am to 5:00 pm  
1-800-283-5292  
**Company Contact Name:** Main Office  
**Emergency phone number:** CHEMTREC 24 HOUR EMERGENCY NUMBER:  
1-800-424-9300

### SECTION 2: Hazard(s) identification

**Classification of the chemical in accordance with paragraph (d) of §1910.1200:**

***Physical hazards***

No physical hazards for this product

***Health hazards***

Skin irritation, Category 2

Eye irritation, Category 2A

Specific target organ toxicity - single exposure, Category 3, Respiratory system.

***Environmental hazards***

Acute aquatic toxicity (Category 3), H402

Chronic aquatic toxicity (Category 3), H412

**GHS Signal word:**

**WARNING**

**GHS Hazard statement(s):**

Causes skin irritation  
Causes serious eye damage  
May cause respiratory irritation  
Harmful to aquatic life  
Harmful to aquatic life with long lasting effects

**GHS Hazard symbol(s):**



**GHS Precautionary statement(s):**

**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.  
Wear protective gloves/eye protection/face protection.

**Response:**

If on skin: Wash with plenty of water.  
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.  
Call a poison center/doctor if you feel unwell.  
Specific treatment (see any additional information on this label).  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

**Disposal:**

Dispose of contents/container to a suitable treatment site in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise  
Classified (HNOC):**

None known.

**Percentage of ingredient(s) of unknown acute toxicity:**

100% of the mixture consists of ingredients of unknown acute toxicity (oral/dermal/inhalation).

**SECTION 3: Composition/information on ingredients**

**Substance:**

| Chemical name             | CAS#     | Concentration (weight %) |
|---------------------------|----------|--------------------------|
| Tricaine Methanesulfonate | 886-86-2 | 100%                     |

**SECTION 4: First-aid measures**

**Description of necessary measures:**

**Inhalation:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

**Skin contact:** If swallowed, wash mouth out with water provided the person is conscious. Do not induce vomiting. Call a physician.

**Eye contact:** In case of contact with eyes, check for and remove contact lenses, then flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Ingestion:** If swallowed, wash out mouth with copious amounts of water - if the person is conscious. NEVER GIVE LIQUIDS TO AN UNCONSCIOUS PERSON. Do not induce vomiting. Call a physician.

**Most important symptoms/effects, acute and delayed:** Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

**Indication of immediate medical attention and special treatment needed:** There is no specific antidote and treatment should be directed at the control of symptoms and the clinical condition.

**SECTION 5: Fire-fighting measures**

**Suitable extinguishing media:** Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

**Unsuitable extinguishing media:** Do not use water jet.

**Specific hazards arising from the chemical:** Emits toxic fumes under fire conditions. Combustion products – Combustion products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), and sulfur oxides (SO, SO<sub>3</sub>...).

**Special protective equipment and precautions for fire-fighters:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dusts. Wear appropriate protective equipment, such as respirator, gloves, goggles and protective clothing, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

**Methods and material for containment and cleaning up:** Sweep up, place in a bag, and hold for disposal. Avoid breathing dust. Ventilate area and wash spill site after picking up material.

**SECTION 7: Handling and storage**

**Precautions for safe handling:** Use in a well-ventilated area. Avoid inhalation, contact with eyes, skin, and clothing. Avoid repeated or prolonged exposure. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

**Conditions for safe storage, including any incompatibles:** Keep container tightly closed. Keep away from heat, open flame, and strong oxidizing agents. Ground all storage and handling equipment. Dispose of in accordance to local, state, federal, and international guidelines.

**SECTION 8: Exposure controls/personal protection**

**Control Parameters:**

**Occupational exposure limits:**

| <b>US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):<br/>Permissible Exposure Limits</b> |                             |                              |
|-----------------------------------------------------------------------------------------|-----------------------------|------------------------------|
| <b>Substance</b>                                                                        | <b>PEL-TWA<br/>(8 hour)</b> | <b>PEL-STEL<br/>(15 min)</b> |
|                                                                                         |                             |                              |

|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Tricaine methanesulfonate | No data available | No data available |
|---------------------------|-------------------|-------------------|

| US ACGIH Threshold Limit Values |                   |                   |
|---------------------------------|-------------------|-------------------|
| Substance                       | TLV-TWA (8 hour)  | TLV-STEL (15 min) |
| Tricaine methanesulfonate       | No data available | No data available |

| NIOSH Exposure Limits     |                   |                   |
|---------------------------|-------------------|-------------------|
| Substance                 | TWA               | STEL              |
| Tricaine methanesulfonate | No data available | No data available |

**Appropriate engineering controls:** Mechanical exhaust required. Use sufficient natural or mechanical ventilation to keep dust level below the PEL where available.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Use chemical safety goggles. Eye protection should be compliant with OSHA regulations.

**Skin and hand protection:** Wearing chemical resistant gloves impervious to the specific material handled is advised to prevent skin contact. 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.

**Respiratory protection:** Where risk assessment shows air purifying respirators are appropriate, use type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Other:** Wear protective boots, and apron or lab coat. Safety shower and eye bath.

**Thermal hazards:** No data available.

**SECTION 9: Physical and chemical properties**

|                                      |                    |
|--------------------------------------|--------------------|
| <b>Appearance</b>                    |                    |
| <b>Physical state:</b>               | Crystalline powder |
| <b>Color:</b>                        | White              |
| <b>Odor:</b>                         | Odorless           |
| <b>Odor threshold:</b>               | No data available  |
| <b>pH:</b>                           | No data available  |
| <b>Melting point/freezing point:</b> | 148 - 150 °C       |
| <b>Initial boiling point and</b>     | No data available  |

|                                                     |                                     |
|-----------------------------------------------------|-------------------------------------|
| <b>boiling range:</b>                               |                                     |
| <b>Flash point:</b>                                 | No data available                   |
| <b>Evaporation rate:</b>                            | No data available                   |
| <b>Flammability (solid, gas):</b>                   | Non-flammable                       |
| <b>Upper/lower flammability or explosive limits</b> |                                     |
| <b>Flammability limit – lower (%):</b>              | Not applicable                      |
| <b>Flammability limit – upper (%):</b>              | Not applicable                      |
| <b>Explosive limit – lower (%):</b>                 | Not applicable                      |
| <b>Explosive limit – upper (%):</b>                 | Not applicable                      |
| <b>Vapor pressure:</b>                              | No data available                   |
| <b>Vapor density:</b>                               | No data available                   |
| <b>Relative density (Specific gravity):</b>         | No data available                   |
| <b>Solubility (ies):</b>                            | highly soluble in water. Up to 11%. |
| <b>Partition coefficient (n-octanol/water):</b>     | No data available                   |
| <b>Auto-ignition temperature:</b>                   | No data available                   |
| <b>Decomposition temperature:</b>                   | No data available                   |
| <b>Viscosity:</b>                                   | No data available                   |
| <b>Other information:</b>                           |                                     |
| <b>Molecular weight:</b>                            | 261.29 g/mole                       |
| <b>Water content:</b>                               | < 0.1%                              |

#### SECTION 10: Stability and reactivity

|                                            |                                                                                                                                 |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity:</b>                         | Not chemically reactive.                                                                                                        |
| <b>Chemical stability:</b>                 | Stable under normal ambient and anticipated conditions of use.                                                                  |
| <b>Possibility of hazardous reactions:</b> | Hazardous reactions not anticipated.                                                                                            |
| <b>Conditions to avoid:</b>                | Excessive heat or open flame.                                                                                                   |
| <b>Incompatible materials:</b>             | Strong oxidizing agents.                                                                                                        |
| <b>Hazardous decomposition Products:</b>   | Carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ....), and sulfur oxides (SO, SO <sub>3</sub> ,...). |

#### SECTION 11: Toxicological information

##### Information on likely routes of exposure:

|                    |                                                                                                        |
|--------------------|--------------------------------------------------------------------------------------------------------|
| <b>Inhalation:</b> | Dust may be irritating to the mucous membranes and upper respiratory tract. May be harmful if inhaled. |
| <b>Ingestion:</b>  | May be harmful if swallowed.                                                                           |
| <b>Skin:</b>       | May cause skin irritation. May be harmful if absorbed through the skin.                                |
| <b>Eyes:</b>       | May cause eye irritation.                                                                              |

##### Symptoms related to the physical, chemical, and toxicological characteristics:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Delayed and immediate effects and chronic effects from short or long-term exposure:**  
No further information.

**Numerical measures of toxicity:**  
**Ingredient Information:**

| Substance                 | Test Type (species)               | Value             |
|---------------------------|-----------------------------------|-------------------|
| Tricaine methanesulfonate | LD <sub>50</sub> Oral (Mouse)     | 2400 mg/kg        |
|                           | LD <sub>50</sub> Oral (Rabbit)    | 4000 mg/kg        |
|                           | LD <sub>50</sub> Dermal (Rabbit)  | No data available |
|                           | LD <sub>50</sub> Oral (Rat)       | 5200 mg/kg        |
|                           | LC <sub>50</sub> Inhalation (Rat) | No data available |

**Skin corrosion/irritation:** May cause mild skin irritation.

**Serious eye damage/eye irritation:** May cause mild eye irritation.

**Respiratory sensitization:** No information available on the product, however none of the components have been classified as a respiratory sensitizer (or are below the concentration threshold for classification).

**Skin sensitization:** No information available on the mixture, however none of the components have been classified as a skin sensitizer (or are below the concentration threshold for classification).

**Germ cell mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components are listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.

**Reproductive toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

**Specific target organ toxicity-  
Single exposure:**

Dust may be irritating to the mucous membranes and upper respiratory tract. May be harmful if inhaled after a single exposure.

**Specific target organ toxicity-  
Repeat exposure:**

No information available on the mixture, however none of the components have been classified for STOT RE (or are below the concentration threshold for classification).

**Aspiration hazard:**

No information available on the mixture, however none of the components have been classified for aspiration hazard (or are below the concentration threshold for classification).

**Further information:**

No data available.

**SECTION 12: Ecological information**

**Ecotoxicity:**

**Product data:** No data available.

**Ingredient Information:**

| Substance                 | Test Type                                            | Species               | Value             |
|---------------------------|------------------------------------------------------|-----------------------|-------------------|
| Tricaine methanesulfonate | LC <sub>50</sub> Oncorhynchus mykiss (rainbow trout) | Fish                  | 40.9 mg/l - 96 h  |
|                           | LC <sub>50</sub>                                     | Aquatic Invertebrates | No data available |
|                           | EC/LC <sub>50</sub>                                  | Bacteria              | No data available |

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

**Other adverse effects:** None known.

**SECTION 13: Disposal considerations**

**Appropriate method of disposal of substance or preparation**

Contact a licensed professional disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local regulations.



## SECTION 14: Transport Information

### US Department of Transportation Classification (49CFR)

Not regulated under DOT.

### IMDG

Not regulated under IMDG.

### IATA (Country variations may apply)

Not regulated under IATA.

### Environmental hazards

No data found.

### Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

No further relevant information available.

### Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.

None.

## SECTION 15: Regulatory information

### USA:

**United States Federal Regulations:** This SDS complies with the OSHA, 29 CFR 1910.1200. The product is hazardous under OSHA.

**Toxic Substances Control Act (TSCA)** – All substances in this product are listed, as required, or are exempt from the TSCA inventory.

### **SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:**

Section 302 – No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**CERCLA Hazardous Substance List, 40 CFR 302.4:** This product does not contain chemicals listed on CERCLA.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):** None.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):** None.

### **SARA Title III**

**Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):** None.

**Section 311/312 (40 CFR 370):**

**Acute Health Hazard:** Yes  
**Chronic Health Hazard:** No  
**Fire Hazard:** No  
**Pressure Hazard:** No  
**Reactivity Hazard:** No

**Section 313 Toxic Release Inventory (40 CFR 372):** None.

**STATE REGULATIONS:**

This SDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986):** No components are listed on Prop 65.

**Massachusetts Right to Know:** None of the components are listed on the Massachusetts Right to Know List.

**New Jersey Right to Know:** 3-Ethoxycarbonylanilinium methanesulphonate (Tricaine methanesulfonate) is listed on the New Jersey Right to Know list.

**Pennsylvania Right to Know:** 3-Ethoxycarbonylanilinium methanesulphonate (Tricaine methanesulfonate) is listed on the Pennsylvania Right to Know List.

**Canada WHMIS Hazard Class:** D2B –Toxic material.

**SECTION 16: Other information**

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To the best of our knowledge, the information contained herein is accurate. However Syndel USA does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.