



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US - OSHA Hazard Communication Standard (29 CFR 1910.1200)

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Revision Number 1

## 1. Identification

### Product identifier

Product Name TideForce™ TFZ-812

### Other means of identification

Product Code(s) TFZ-812

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Water treatment chemical, Flocculant and coagulant, research chemical

Restrictions on use None known

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

#### Supplier Address

Tidal Vision  
3710 Iron Gate Rd.  
Bellingham, WA 98226  
Telephone #: 360-603-7676

E-mail customerservice@tidalvisionusa.com

### Emergency telephone number

Emergency telephone Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements

Hazard statements

Not classified.

**Other information**

No information available.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No       | Weight-% | Trade secret |
|---------------|--------------|----------|--------------|
| Organic acid  | Trade secret | < 10     | *            |
| Chitosan salt | Trade secret | <15      | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

**Description of first aid measures**

|   |  |
|---|--|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.   |
| <b>Inhalation</b>                         | Remove to fresh air.   |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.   |
| <b>Skin contact</b>                       | Wash skin with soap and water.   |
| <b>Ingestion</b>                          | Clean mouth with water and afterwards drink plenty of water.   |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with eyes. Wear personal protective clothing (see section 8). |

**Most important symptoms and effects, both acute and delayed**

|                            |                           |
|----------------------------|---------------------------|
| <b>Symptoms</b>            | None known.               |
| <b>Effects of Exposure</b> | No information available. |

**Indication of any immediate medical attention and special treatment needed**

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

### 5. Fire-fighting measures

|                                     |   |
|-------------------------------------|---|
| <b>Suitable Extinguishing Media</b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|-------------------------------------|---|

|   |  |
|---|--|
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.  |
| <b>Specific hazards arising from the chemical</b>                     | Thermal decomposition can lead to release of irritating gases and vapors.  |
| <b>Hazardous combustion products</b>                                  | Carbon oxides.   |
| <b>Explosion data</b>   |  |
| <b>Sensitivity to mechanical impact</b>                               | None.  |
| <b>Sensitivity to static discharge</b>                                | None.  |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. Avoid contact with eyes.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so. Dike to contain spill.

**Methods for cleaning up** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Wash hands thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

| Chemical name | ACGIH TLV                   | OSHA PEL   | NIOSH  |
|---------------|-----------------------------|--|--|
| Organic acid  | STEL: 15 ppm<br>TWA: 10 ppm | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>(vacated) TWA: 10 ppm<br>(vacated) TWA: 25 mg/m <sup>3</sup> | IDLH: 50 ppm<br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 15 ppm<br>STEL: 37 mg/m <sup>3</sup> |

### Appropriate engineering controls

**Engineering controls** Showers

Eyewash stations  
Ventilation systems.

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | If splashes are likely to occur, wear safety glasses with side-shields.  |
| <b>Hand protection</b>                | No protective equipment is needed under normal use conditions.   |
| <b>Skin and body protection</b>       | No protective equipment is needed under normal use conditions.   |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.  |

## **9. Physical and chemical properties**

### **Information on basic physical and chemical properties**

|                       |                            |
|-----------------------|----------------------------|
| <b>Appearance</b>     | Low viscosity amber liquid |
| <b>Physical state</b> | Liquid                     |
| <b>Color</b>          | amber                      |
| <b>Odor</b>           | Slight vinegar             |
| <b>Odor threshold</b> | No data available          |

| <b><u>Property</u></b>                         | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|--|----------------------|--------------------------------|
| <b>pH</b>                                      |                      | No data available              |
| <b>pH (as aqueous solution)</b>                |                      | 4.0-4.5                        |
| <b>Melting point / freezing point</b>          |                      | No data available              |
| <b>Initial boiling point and boiling range</b> |                      | No data available              |
| <b>Flash point</b>                             |                      | No data available              |
| <b>Evaporation rate</b>                        |                      | No data available              |
| <b>Flammability</b>                            |                      | No data available              |
| <b>Flammability Limit in Air</b>               |                      |                                |
| <b>Upper flammability or explosive limits</b>  |                      | No data available              |
| <b>Lower flammability or explosive limits</b>  |                      | No data available              |
| <b>Vapor pressure</b>                          |                      | No data available              |
| <b>Vapor density</b>                           |                      | No data available              |
| <b>Relative density</b>                        |                      | No data available              |
| <b>Water solubility</b>                        |                      | No data available              |
| <b>Solubility(ies)</b>                         |                      | No data available              |
| <b>Partition coefficient</b>                   |                      | No data available              |
| <b>Autoignition temperature</b>                |                      | No data available              |
| <b>Decomposition temperature</b>               |                      | No data available              |
| <b>Kinematic viscosity</b>                     |                      | No data available              |
| <b>Dynamic viscosity</b>                       |                      | No data available              |

### **Other information**

|                             |                          |
|-----------------------------|--------------------------|
| <b>Explosive properties</b> | No information available |
| <b>Oxidizing properties</b> | No information available |
| <b>Softening point</b>      | No information available |
| <b>Molecular weight</b>     | No information available |
| <b>VOC content</b>          | No information available |

**Liquid Density** No information available  
**Bulk density** No information available

## 10. Stability and reactivity

**Reactivity** None under normal use conditions.  
**Chemical stability** Stable under normal conditions.  
**Possibility of hazardous reactions** None under normal processing.  
**Conditions to avoid** None known based on information supplied.  
**Incompatible materials** None known based on information supplied.  
**Hazardous decomposition products** Carbon oxides.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

**Inhalation** No known effects under normal use conditions.  
**Eye contact** No known effects under normal use conditions.  
**Skin contact** No known effects under normal use conditions.  
**Ingestion** No known effect based on information supplied.

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

**Symptoms** None known.

### Acute toxicity

**Numerical measures of toxicity**  
 No information available

#### Component Information

| Chemical name | Oral LD50            | Dermal LD50             | Inhalation LC50         |
|---------------|----------------------|-------------------------|-------------------------|
| Organic acid  | = 3310 mg/kg ( Rat ) | = 1060 mg/kg ( Rabbit ) | = 11.4 mg/L ( Rat ) 4 h |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** No information available.  
**Serious eye damage/eye irritation** No information available.  
**Respiratory or skin sensitization** No information available.

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Germ cell mutagenicity</b>   | No information available. |
| <b>Carcinogenicity</b>          | No information available. |
| <b>Reproductive toxicity</b>    | No information available. |
| <b>STOT - single exposure</b>   | No information available. |
| <b>STOT - repeated exposure</b> | No information available. |
| <b>Aspiration hazard</b>        | No information available. |
| <b>Other adverse effects</b>    | No information available. |
| <b>Interactive effects</b>      | No information available. |

## 12. Ecological information

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

| Chemical name | Algae/aquatic plants | Fish   | Toxicity to microorganisms | Crustacea                          |
|---------------|----------------------|--|----------------------------|------------------------------------|
| Organic acid  | -                    | LC50: =79mg/L (96h, Pimephales promelas)<br>LC50: =75mg/L (96h, Lepomis macrochirus) | -                          | EC50: =65mg/L (48h, Daphnia magna) |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

### Component Information

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Organic acid  | -0.17                 |

**Other adverse effects** No information available.

## 13. Disposal considerations

### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. Transport information

**DOT** Not regulated

IATA Not regulatedIMDG Not regulated**15. Regulatory information****International Inventories**

Contact supplier for inventory compliance status

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Organic acid  | 5000 lb                     | -                      | -                         | X                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                   |
|---------------|--------------------------|------------------------------------|--|
| Organic acid  | 5000 lb                  | -                                  | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------|------------|---------------|--------------|
| Organic acid  | X          | X             | X            |

**U.S. EPA Label Information****EPA Pesticide Registration Number** Not applicable

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 1 | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 1 | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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**Revision Note** Revised name

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**