


# SAFETY DATA SHEET (SDS)

## GreenClean® FX Liquid Algaecide

|                  |            |
|------------------|------------|
| Form #:          | SDS-075    |
| Revision Date:   | 07/19/2019 |
| Revision #:      | 04         |
| Supersedes Date: | 02/08/2019 |

| Section 1: Identification |  |  |  |
|---------------------------|--|--|--|
| <b>Product Name:</b>      | GreenClean® FX Liquid Algaecide  | <b>Product Type / Description:</b>                 | Bactericide / Fungicide                                  |
| <b>Recommended Use:</b>   | Bactericide / Fungicide.   | <b>Other Means of Identification:</b>              | Aqueous solution of hydrogen peroxide and peracetic acid |
| <b>Use Restrictions:</b>  | It is a violation of federal law to use this product in a manner inconsistent with its labeling. |  |  |
| <b>Manufacturer:</b>      | <b>BioSafe Systems, LLC</b><br>22 Meadow Street   East Hartford, CT 06108                        | <b>EPA Registration #:</b>                         | 70299-16   |
| <b>Telephone Number:</b>  | 1-888-273-3088   | <b>Emergency Number: 1-800-424-9300 (CHEMTREC)</b> |  |

| Section 2: Hazard Identification   |   |
|--|---|
| <b>GHS Classification</b>  | <b>Hazard Statements</b>  |
| Acute Toxicity<br>Oral: Category 5<br>Dermal: Category 5<br>Inhalation: Category 5<br>Serious Eye Damage/Eye Irritation: Category 1<br>Skin Corrosion/Irritation: Category 3   | H302: Harmful if swallowed.<br>H316: Causes mild skin irritation.<br>H318: Causes serious eye damage.   |
| <b>Pictograms</b>  | <b>Signal Word</b>  |
|    | <b>DANGER</b>   |
| Precautionary Statements   |   |
| <b>General</b>   | <b>Response</b>   |
| P101: If medical advice is needed, have product container or label at hand.<br>P102: Keep out of reach of children.<br>P103: Read label before use.  | P304+P340+P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.<br>P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310: Immediately call a POISON CENTER/doctor.<br>P312: Call a POISON CENTER or doctor if you feel unwell.<br>P332+P313: IF SKIN irritation occurs: Get medical advice/attention. |
| <b>Prevention</b>  | <b>Storage / Disposal</b>   |
| P261: Avoid breathing dust/fume/gas/mist/vapors/spray.<br>P264: Wash thoroughly after handling.<br>P271: Use only outdoors or in a well-ventilated area.<br>P280: Wear protective gloves, clothing, eye protection, face protection. | P501: Dispose of contents/container in accordance with local/regional/national/international regulations.   |

| Section 3: Composition / Information on Ingredients |           |                     |
|---|-----------|---------------------|
| Components  | CAS-No    | % Composition (w/w) |
| Hydrogen Peroxide                                   | 7722-84-1 | 5.34%               |
| Peroxyacetic Acid                                   | 79-21-0   | 1.36%               |
| Acetic Acid   | 64-19-7   | 14.5%               |

| Section 4: First-Aid Measures |   |
|-------------------------------|---|
| <b>Eye Contact:</b>           | Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.   |
| <b>Skin Contact:</b>          | Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.   |
| <b>Ingestion:</b>             | Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. |

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|                            |  |
|----------------------------|--|
| <b>Inhalation:</b>         | Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1.800.222.1222 for emergency treatment information. |
| <b>Notes to Physician:</b> | Probable mucosal damage may contraindicate the use of gastric lavage.  |

| Section 5: Fire-Fighting Measures             |  |
|---|--|
| <b>Suitable Extinguishing Media:</b>          | Water spray.   |
| <b>Unsuitable Extinguishing Media:</b>        | Carbon dioxide, alcohol foam, dry chemical. Heavy water stream can spread fire.  |
| <b>Combustion Products:</b>                   | Carbon oxides.   |
| <b>Unusual Fire and Explosion Hazards:</b>    | Product is not flammable but during a fire, product can decompose and generate oxygen which can initiate or promote combustion.  |
| <b>Protective Equipment for Firefighters:</b> | Full chemical protection suits and boots (rubber or PVC) and self-contained breathing apparatus. Cordon the area to keep out all unnecessary personnel. Keep upwind. Use large quantities of water spray to fight fire. Cool containers / tanks with water spray. If safe to do, move product away from fire to secure area. Eliminate all possible sources of ignition and remove flammable material. |

| Section 6: Accidental Release Measures                    |   |
|---|---|
| <b>Personal Precautions:</b>                              | Ensure adequate ventilation. Avoid inhalation, ingestion and contact with skin and eyes.  |
| <b>Emergency Procedures:</b>                              | Ensure clean-up is conducted by trained personnel. Personnel should wear appropriate protective equipment. Remove all sources of ignition. Keep people away from and upwind of spill/leak. If facing concentrations above exposure limits personnel shall wear certified respirators.   |
| <b>Environmental Precautions:</b>                         | Prevent undiluted spillage from entering sewers, basements or watercourses.   |
| <b>Methods and Material for Containment and Clean-Up:</b> | Dike to collect large liquid spills. Contain spills with earth or sand or inert absorbent. Stop leak and contain spill if this can be done safely. Dilute with large quantities of water. If safe to do so, move product to secure area. Control runoff and isolate discharged material for proper disposal. Do not seal waste material, do not use textiles, tissues, saw dust or combustible materials to clean the spill. Do not return product to the original storage container/tank due to risk of decomposition. |

| Section 7: Handling and Storage |  |
|---------------------------------|--|
| <b>Handling:</b>                | Wear protective gloves/eye protection/face protection/body, skin protection. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Avoid breathing fumes/mist/vapors. Use only outdoors or in a well-ventilated area. |
| <b>Storage:</b>                 | Store in cool, ventilated area. Keep away from heat. Keep only in original container. Protect from sunlight. Store at temperatures not exceeding 30°C (86°F) for product quality. Do not store near combustible materials.                           |
| <b>Incompatible Materials:</b>  | Combustible materials.   |

| Section 8: Exposure Controls / Personal Protection |   |  |  |
|--|---|--|--|
| Components with Workplace Control Parameters       |   |  |  |
| Component  | ACGIH   | NIOSH  | OSHA   |
| Acetic Acid  | TWA: 10 ppm<br>STEL: 15 ppm   | TWA: 25 mg/m <sup>3</sup> - 8 hours.<br>TWA: 10 ppm - 8 hours.<br>IDLH: 50 ppm | TWA: 25 mg/m <sup>3</sup> - 8 hours.<br>TWA: 10 ppm - 8 hours. |
| Hydrogen Peroxide                                  | TWA: 1 ppm  | TWA: 1.4 mg/m <sup>3</sup> - 8 hours.<br>TWA: 1 ppm - 8 hours.<br>IDLH: 75 ppm | TWA: 1.4 mg/m <sup>3</sup> - 8 hours.<br>TWA: 1 ppm - 8 hours. |
| Peracetic Acid                                     | STEL: 0.4 ppm   |  |  |
| <b>Engineering Controls:</b>                       | Ensure adequate ventilation. Emergency eye wash stations / emergency showers should be available in the immediate vicinity of any potential exposure. |  |  |
| <b>General Hygienic Practices:</b>                 | Do not eat, drink or smoke during use. Wash hands immediately after handling the product.   |  |  |
| Personal Protective Equipment                      |   |  |  |
| <b>Respiratory Protection:</b>                     | Use NIOSH-approved air-purifying or supplied air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.    |  |  |
| <b>Eye / Face Protection:</b>                      | Chemical resistant goggles or face shield if splashes are expected to occur.  |  |  |
| <b>Hand Protection:</b>                            | Rubber/latex/neoprene or other suitable chemical resistant gloves. Do not use leather or cotton gloves.   |  |  |
| <b>Skin / Body Protection:</b>                     | Wear suitable protective clothing.  |  |  |

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### Section 9: Physical and Chemical Properties

|                          |                          |   |               |                                   |                        |
|--------------------------|--------------------------|---|---------------|-----------------------------------|------------------------|
| <b>Appearance:</b>       | Clear, colorless liquid. | <b>Odor:</b>                                    | Vinegar-like. | <b>Odor Threshold:</b>            | NA                     |
| <b>Physical State:</b>   | Liquid.                  | <b>pH:</b>                                      | <1.5          | <b>Specific Gravity:</b>          | 1.04 g/cm <sup>3</sup> |
| <b>Melting Point:</b>    | NA                       | <b>Freezing Point:</b>                          | -30°C (-22°F) | <b>Boiling Point:</b>             | NA                     |
| <b>Flash Point:</b>      | NA                       | <b>Flammability:</b>                            | NA            | <b>Flammability Limits:</b>       | NA                     |
| <b>Vapor Pressure:</b>   | 22 mm Hg (25°C)          | <b>Vapor Density:</b>                           | NA            | <b>Solubility:</b>                | Complete.              |
| <b>Evaporation Rate:</b> | NA                       | <b>Auto-Ignition Temperature:</b>               | NA            | <b>Decomposition Temperature:</b> | SADT > 55°C (131°F)    |
| <b>Relative Density:</b> | NA                       | <b>Partition Coefficient n-octanol / water:</b> | NA            | <b>Viscosity:</b>                 | NA                     |

### Section 10: Stability and Reactivity

|  |   |
|--|---|
| <b>Reactivity:</b>                       | No specific data available.   |
| <b>Stability:</b>                        | Stable under recommended storage conditions.  |
| <b>Conditions to Avoid:</b>              | Open flames/heat sources, temperatures above 55°C (131°F), direct sunlight, combustible materials.  |
| <b>Incompatible Materials:</b>           | Acids, bases, reducing agents, organic materials, heavy metals, salts of metals.                    |
| <b>Hazardous Decomposition Products:</b> | Thermal decomposition generates corrosive vapors, acetic acid and oxygen which supports combustion. |

### Section 11: Toxicological Information

#### Acute Toxicological Data

|                             |   |                            |             |                                  |                |
|-----------------------------|---|----------------------------|-------------|----------------------------------|----------------|
| <b>Oral LD50 Rat:</b>       | >2000 mg/kg                             | <b>Dermal LD50 Rabbit:</b> | >5000 mg/kg | <b>Inhalation LC50 Rat:</b>      | Not available. |
| <b>Symptoms and Effects</b> |   |                            |             |                                  |                |
| <b>Condition</b>            | <b>Acute Effects</b>                    |                            |             | <b>Chronic (Delayed) Effects</b> |                |
| <b>Eye Contact:</b>         | Causes serious eye damage.              |                            |             | None.                            |                |
| <b>Skin Contact:</b>        | May cause irritation.                   |                            |             | None.                            |                |
| <b>Inhalation:</b>          | May cause respiratory tract irritation. |                            |             | None.                            |                |
| <b>Ingestion:</b>           | Harmful if swallowed.                   |                            |             | None.                            |                |

### Section 12: Ecological Information

| Ecotoxicity:                          | Duration   | Species                                    | Value      |
|---------------------------------------|--|--|------------|
|                                       | 48 hr LC50   | <i>Oncorhynchus mykiss</i> (rainbow trout) | >40 mg/L   |
|                                       | 48 hr EC50   | <i>Crangon crangon</i>                     | 126.8 mg/L |
|                                       | 5 min EC 100   | <i>Pseudomonas aeruginosa</i>              | 5 mg/L     |
| <b>Persistence and Degradability:</b> | Weak persistence of degradation products.  |  |            |
| <b>Bioaccumulative Potential:</b>     | Does not bioaccumulate.  |  |            |
| <b>Mobility in Soil:</b>              | Non-significant adsorption soil degradation, >99% in 20 minutes.                                 |  |            |
| <b>Results of PBT &amp; vPvB:</b>     | This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). |  |            |
| <b>Other Adverse Effects:</b>         | None known.  |  |            |

### Section 13: Disposal Considerations

|  |   |
|--|---|
| <b>Waste from Residues and Unused Product:</b> | Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.  |
| <b>Contaminated Container Disposal:</b>        | Do not reuse or refill containers. Triple rinse empty containers with clean water. Clean and empty containers should be taken to an approved waste handling site for recycling or disposal. |

### Section 14: Transport Information

| UN Number                   | UN Proper Shipping Name                     | Hazard Class (Subsidiary) | Packing Group | IATA           | Marine Pollutant |
|-----------------------------|---|---------------------------|---------------|----------------|------------------|
| DOT                         | Not regulated.                              |                           |               | Not regulated. | No               |
| TDG                         | Not regulated.                              |                           |               |                |                  |
| IMDG                        | Not regulated.                              |                           |               |                |                  |
| <b>Special Precautions:</b> | Store upright in original vented container. |                           |               |                |                  |
| <b>Shipping Placards:</b>   | None.                                       |                           |               |                |                  |

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| Section 15: Regulatory Information |     |                                    |           |           |                 |
|------------------------------------|-----|------------------------------------|-----------|-----------|-----------------|
| TSCA Inventory List                |     | US EPA CERCLA Hazardous Substances |           |           | Clean Water Act |
| Acetic Acid                        | Yes | Acetic Acid                        | 5000 lbs. | 5000 lbs. |                 |
| Hydrogen Peroxide                  | Yes | Hydrogen Peroxide                  | NA        | NA        |                 |
| Peracetic Acid                     | Yes | Peracetic Acid                     | NA        | NA        |                 |

| SARA Title III    |               |             |   |         |                              |
|-------------------|---------------|-------------|---|---------|------------------------------|
|                   | Sec. 302 TPQ. | Sec 304 RQ. | Sec 311 / Sec 312 Hazard Category   | Sec 313 | Clean Air Act Threshold Qty. |
| Acetic Acid       | NA            | NA          | NA  | NA      | NA                           |
| Hydrogen Peroxide | 1000 lbs.     | 1000 lbs.*  | <b>Physical:</b> Oxidizer<br><b>Health:</b> Acute Toxicity; Skin Corrosion or Irritation; Serious Eye Damage or Eye Irritation; Specific target organ toxicity                              | NA      | NA                           |
| Peracetic Acid    | 500 lbs.      | 500 lbs.    | <b>Physical:</b> Organic Peroxide; Corrosive to Metals<br><b>Health:</b> Acute Toxicity; Skin Corrosion or Irritation; Serious Eye Damage or Eye Irritation; Specific target organ toxicity | Yes     | 10000 lbs.                   |

\*Hydrogen Peroxide Reportable Quantity only applies to concentrations > 52%

|                                     |                  |                        |                      |                          |
|-------------------------------------|------------------|------------------------|----------------------|--------------------------|
| <b>NFPA 704 Rating</b>              | <b>Health:</b> 2 | <b>Flammability:</b> 0 | <b>Reactivity:</b> 0 | <b>Special:</b> None.    |
| <b>HMIS Rating</b>                  | <b>Health:</b> 2 | <b>Flammability:</b> 0 | <b>Physical:</b> 0   | <b>PPE:</b> Recommended. |
| <b>Uniform Fire Code (NFPA 400)</b> | Not applicable.  |                        |                      |                          |

|                           |  |
|---------------------------|--|
| <b>California Prop 65</b> | This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.   |
| <b>FIFRA</b>              | This product is a registered pesticide with the United States Environmental Protection Agency (EPA). These requirements may differ from the classification criteria and hazard information required for a safety data sheet under the Global Harmonized Systems (GHS), and for workplace labels of non-pesticide chemicals. It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Always refer to product label for further precautionary information and use directions. |

### Section 16: Other Information

**According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations**

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