

# Material Safety Data Sheet



## 1. IDENTIFICATION

**Product Name:** TerraCyte®

**Product Type:**

Granular Algaecide/Fungicide

**Manufacturer:**

BioSafe Systems LLC

22 Meadow Street

East Hartford, CT 06108

**Creation Date:** 2/07

**NOTE:** Not valid two years after creation date.

## 2. COMPONENTS

Sodium Carbonate Peroxyhydrate:

CAS .....15630-89-4

Calcium Carbonate

## 3. HEALTH HAZARDS DATA

**If on skin:** May cause slight irritation.

**If in eyes:** May cause severe eye irritation.

**If swallowed:** Severe irritation of the mouth, throat, esophagus and stomach.

**If inhaled:** Slight nose and throat irritation.

## 4. FIRST AID

**If in eyes:**

• 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.

**If on skin or clothing:**

• 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.

**If swallowed:**

• 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.

**If inhaled:**

• Move person to fresh air.

• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

• Call a 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 medical treatment information.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. FIRE AND EXPLOSION DATA

**Special fire hazards:** Oxidizing substance that causes exothermic reactions with organic materials.

**Fire fighting methods:** Product is not flammable and can be quickly diluted with clean water.

## 6. SPILL OR LEAK PROCEDURES

**Cleanup:** Collect the product with suitable means, shovel, sweep, avoiding dust formation.

**Waste Disposal:** Do not return spilled or contaminated material to inventory. Clean the area with large quantities of clear, cold water.

## 7. HANDLING AND STORAGE

• Never return product back to the original container

• Keep concentrate away from reactive substances

• Prevent contact with organic materials

• Keep product in original container

• Store in cool, dry area

• Keep out of direct sunlight

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory:** For most conditions, no respiratory protection should be needed.

**Eyes:** Use dust proof chemical goggles.

**Skins:** Rubber gloves – For brief contact, no precautions needed. Prolonged contact, use chemical gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White, granular, solid

**Odor:** None

**Bulk Density:** 0.35 – 0.65 g/cm<sup>3</sup>

**Solubility:** 140 g/L @ 24°C (75°F)

**pH:** 1% solution: 10.4 – 10.6

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions

**Materials to avoid:**

• Acids

• Bases

• Reducing Agents

• Organic Materials

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:**

• Dermal = LD rabbit > 2000 mg/kg

• Inhalation = LC 0 1 hour rat > 2290 mg/m

• Oral = LD 50 rat 517 mg/kg

## 12. ECOLOGICAL INFORMATION

Toxic to simple cell organisms. Danger to the environment limited; due to product properties.

• No bioaccumulation

• Soil degradation = 99% in 20 minutes

• Considerable abiotic and biotic degradability

• Sediments = Non-significant adsorption products

• Weak persistence of degradation products

• Degradation products = sodium carbonate, carbon dioxide, bicarbonate carbonate, hydrogen dioxide

## 13. DISPOSAL CONSIDERATIONS

**Packing Treatment:** Rinse empty containers with clean water. Clean and empty containers are to be recycled or disposed in accordance with local regulations.

## 14. TRANSPORT INFORMATION

**D.O.T. Shipping Name:** Not regulated

**UN Number:** None

**Hazard Class:** None

**Primary Hazard Label:** None

**Subsidiary Risk Label:** None

**Packing Group:** None

**WHMIS Classification:** C – Oxidizing

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**BioSafe Systems**  
East Hartford, CT 06108

Form #9004 2/07

# Specimen Label and MSDS

**Granular Algaecide/Fungicide for Ornamental Plants and Turf**

**FOR INDOOR AND OUTDOOR HORTICULTURAL, AGRICULTURAL AND COMMERCIAL USES**

**Active Ingredient:**

Sodium Carbonate

Peroxyhydrate\* .....34.00%

Other Ingredients: .....66.00%

Total: .....100.00%

\*Contains 27.60% Hydrogen Dioxide by weight.

**KEEP OUT OF REACH OF CHILDREN  
DANGER – PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

*(If you do not understand this label, find someone to explain it to you in detail.)*

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• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

• Call a poison control center or doctor for treatment advice.

**If on skin or clothing:**

• Take off contaminated clothing.

• Rinse skin immediately with plenty of water for 15 – 20 minutes.

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• 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.

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**If inhaled:**

• Move person to fresh air.

• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

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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 medical treatment information.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

**Manufactured by: BioSafe Systems LLC  
22 Meadow Street**

**East Hartford, CT 06108**

EPA Registration No. 70299-3

EPA Establishment No. 72859-TX-001

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMAN AND  
DOMESTIC ANIMALS – DANGER:**

**Corrosive:** Causes irreversible eye damage. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin or on clothing. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

When handling wear protective eyewear (goggles or face shield) and chemical resistant gloves. Applicators and handlers must wear coveralls over long-sleeved shirt, long pants, and chemical resistant footwear plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets

inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not apply to treated, finished drinking water reservoirs or drinking water receptacles. This product is highly toxic to bees and other beneficial insects exposed to direct contact on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not apply this product or allow it to drift to crops where beneficials are part of an integrated pest management strategy.

## PHYSICAL AND CHEMICAL HAZARDS

Strong oxidizing agent. **Corrosive.** Do not bring in contact with other pesticides, cleaners or oxidative agents.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and

emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted entry intervals (REI). The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE requirement for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is coveralls, waterproof gloves and shoes plus socks.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until dusts have settled and activating water sprays have dried.

**APPLICATION DIRECTIONS**

Treats, controls and prevents algae, bacteria, fungi and moss on ornamental plants and turf. Organisms controlled include Algae, Moss, Liver Worts, Slime Molds and their spores.

**For use in greenhouses, storage areas and nursery yards:** Spread TerraCyte on walkways, under benches, on gravel and dirt floors, weed control mats and hard surfaces to prevent and control algae, bacteria, fungi, moss, slime molds, and the odors and conditions that these organisms can cause.

TerraCyte is activated by moisture, so applications must either be made over wet surfaces or must be watered immediately after spreading. To treat areas that are already heavily contaminated with algae, slime molds and scum, apply 4 lbs. of TerraCyte per 1000 square feet. Make subsequent preventative treatments by applying 2-4 lbs. of TerraCyte per 1000 square feet. Repeat applications every 5 to 7 days to

control new or established conditions. Optimum treatment time is early morning or late afternoon. If applied to a dry surface, activate TerraCyte with water immediately following application.

Apply TerraCyte using a lawn spreader or any other applicator that will ensure uniform coverage. Calibrate spreaders for accurate output. The following settings are approximations for calibration for specific makes of spreaders.

Make of Spreader	Rate per 1000 sq. ft.	Spreader Settings	Spreader Width
CYCLONE	2 lbs.	4	6 1/2 feet
	4 lbs.	6	6 1/2 feet
SCOTTS	2 lbs.	4	20 inches
	4 lbs.	7	20 inches

**For use on soil surfaces containing growing plants:** Apply TerraCyte to soil surfaces for the prevention and control of Algae, Moss, Liver Worts, Slime Molds and their spores. Use on container, bench, and planters for ornamental plants.

• **Plant beds and bench areas:** TerraCyte is activated by moisture. Applications must be made over wet surfaces. Thoroughly water soil surface to be treated.

For heavily contaminated beds or benches, distribute 15 lbs uniformly over 1000 square feet of bed or bench area.

For follow-up or preventative applications, apply 5 lbs of TerraCyte per 1000 square feet on a weekly to bi-weekly basis.

• **Mature Potted plants:** TerraCyte is activated by moisture. Applications must be made over wet surfaces. Thoroughly water soil surface to be treated.

For curative applications, evenly distribute 0.08 oz or 1/3 teaspoon of TerraCyte over the surface of 8-inch pots; 0.13 oz or 1/2 teaspoon of TerraCyte over the surface of 10-inch pots.

For follow-up and preventative applications, evenly distribute 0.026 oz. or 1/8 teaspoon of TerraCyte over the surface of 8-inch pots; 0.04 oz. or 1/6 teaspoon of TerraCyte over the surface of 10-inch pots. Repeat on a bi-weekly basis.

• **Seedlings or recent transplants:** First test the plants for sensitivity to TerraCyte. TerraCyte increases pH by 0.5 pH unit. TerraCyte is activated by moisture. Applications must be made over wet surfaces. Thoroughly water soil surface to be treated.

For curative applications, evenly distribute 10-15 lbs TerraCyte over 1000 square feet (1/2 to 1 teaspoon per square foot). Rinse TerraCyte granules thoroughly from foliage.

For follow-up and preventative applications, evenly distribute 5 lbs of TerraCyte per 1000 square feet (1/8 teaspoon per square foot). Rinse TerraCyte granules thoroughly from foliage. Repeat on a weekly to bi-weekly basis.

**For use on turf grasses:** Apply TerraCyte to well-established golf course fairways, greens and tees for the prevention and control of Algae, Moss, Slime Molds and their spores. TerraCyte is activated by moisture and must be watered in after application.

The best time to apply TerraCyte for curative applications is either the spring or fall when temperatures are 50°F or above. Apply TerraCyte to well-established golf course fairways, greens and tees at a rate of 8 pounds per 1,000 square feet. When using a drop spreader, uniform coverage is essential for best results (see Tables 2 and 3 for spreader settings). Take caution to avoid overlap. If applying on greens, always open up the spreader off of the green and on the collar.

**Activate TerraCyte with water immediately following application (see Table 1). Water to recommended amount or for at least 10 minutes.**

Make subsequent applications by applying 2 - 4 pounds of TerraCyte per 1,000 square feet. Repeat applications as needed. Apply TerraCyte on consecutive days. The optimum application time is early morning or late afternoon.

During summer months, use TerraCyte for spot treatments. Spoon-feed TerraCyte on infected areas.

**NOTICE:** A broad spectrum of plant and turf species have been found to be tolerant to TerraCyte; however, due to the large number of species and varieties

of ornamental plants and turf, it is impossible to test every one for tolerance to TerraCyte. Neither the manufacturer nor the seller has determined whether or not TerraCyte can be used on all known species of plants and turf. Therefore, test a small section at labeled rates for phytotoxicity prior to widespread use. Repeat applications can raise soil pH to levels that can adversely affect plant growth. TerraCyte is incompatible with metal-based fungicides and fertilizers. Do not apply TerraCyte within three days of metal-based fungicides or fertilizer applications.

**STORAGE AND DISPOSAL**  
Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers in dry conditions in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated (>50°C) in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area

with large quantities of water. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur. Do not store near incompatible materials such as reducing agents, combustible materials, organic materials or acids.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinses (or equivalent). Then offer for recycling or dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned, stay out of smoke.

**WARRANTY**

This material conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing, unfavorable temperatures, water conditions, presence of other materials, method of application, weather, watering practices, nature of soil, disease problem, condition of crop, incompatibility with other chemicals, pre-existing conditions and other conditions influencing the use of this product are beyond the control of the seller. Buyer assumes all risks associated with the use, storage, or handling of this material not in strict accordance with directions given herewith. NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY IS MADE.



For additional information on TerraCyte, call us toll free: 1.888.273.3088

or visit our website: www.biosafesystems.com

**Recommended Application Rates and Drop Spreader Settings**

**Table 1 – Application Rate**

Application Rate lbs. per 1000 sq. ft.	Amount of Water (inches) Applied by Sprinkler Irrigation
2	1/10"
4	1/10"
6	1/10"
8	1/8"

**Table 2 – Scotts® and Prizelawn® Drop Spreader Settings**

Scotts and Prizelawn Rate lbs. per 1000 sq. ft.	Spreader Settings*
2	N/A
4	2
6	2 1/2
8	3

**Table 3 – Gandy® Drop Spreader Settings**

Gandy Rate lbs. per 1000 sq. ft.	Spreader Setting* at 4 mph	Spreader Setting at 6 mph
2	12	14
4	16	19
6	19	22
8	21	24

\* Use disbursement bar.