

## Safety Data Sheet ZeroTol 2.0

### SECTION 1: Identification

#### 1.1 GHS Product identifier

Product name ZeroTol 2.0

1.2 Recommended use Bactericide / Fungicide

#### 1.3 Supplier's details

Name BioSafe Systems  
Address 22 Meadow Street  
East Hartford CT 06108 USA  
Telephone 1.888.273.3088

1.4 Emergency phone number CHEMTREC: 1-800-424-9300

### SECTION 2: Hazard identification

#### 2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)

- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A
- Oxidizing liquids, Cat. 2

#### 2.2 GHS label elements, including precautionary statements

##### Pictograms



##### Signal word

**Danger**

##### Hazard statement(s)

H272 May intensify fire; oxidizer  
H302 Harmful if swallowed  
H314 Causes severe skin burns and eye damage  
H332 Harmful if inhaled

##### Precautionary statement(s)

P101 If medical advice is needed, have label at hand.  
P102 Keep out of reach of children  
P103 Read label before use.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P220 Keep away from clothing and other combustible materials.  
P234 Keep only in original container.

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P261	Avoid breathing fumes, mist, vapors, spray.
P262	Do not get in eyes, on skin or on clothing.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	If swallowed: Call a poison center if you feel unwell.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	For specific treatment see first aid section on label.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use water to extinguish.
P405	Store locked up.
P406	Store in a corrosive resistant container with resistant inner liner.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P411	Store at temperatures not exceeding 77°F (25°C).
P420	Store separately.
P501	Dispose of contents according to local, state and/or federal regulations.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

Component	Concentration
Hydrogen peroxide (CAS no.: 7722-84-1)	20 - 30 % (weight)
Acetic acid (CAS no.: 64-19-7)	1 - 5 % (weight)
Peracetic acid (CAS no.: 79-21-0)	1 - 5 % (weight)

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

General advice	Consult a physician if you feel unwell. Show this safety data sheet to the physician.
If inhaled	<p>Move person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.</p> <p>Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing or shortness of breath.</p>
In case of skin contact	<p>Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse.</p> <p>Acute and delayed symptoms and effects: Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain or blistering.</p>

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In case of eye contact                      Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

Acute and delayed symptoms and effects: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain or significantly impaired vision.

If swallowed                                      Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: Harmful if swallowed. Causes burns to nose, mouth, throat, and digestive tract.

### 4.2 Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation: May cause respiratory irritation.

Symptoms/effects after skin contact: Burns.

Symptoms/effects after eye contact: Serious damage to eyes.

Symptoms/effects after ingestion: Burns.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Water spray.

### 5.2 Specific hazards arising from the chemical

Fire hazard: May intensify fire; oxidizer.

Hazardous decomposition products in case of fire: Toxic fumes may be released.

### 5.3 Special protective actions for fire-fighters

Do not attempt to take action without suitable protective equipment. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection if necessary. Avoid breathing mist, vapors, or spray. Ensure adequate ventilation.

Evacuate personnel to safe areas. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains and avoid releases to the environment.

### 6.3 Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Take up liquid spill into inert absorbent material (e.g. sand, diatomaceous earth) and place in non-metal container for disposal according to local, state, and federal regulations.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Do not swallow. Do not breathe mist, vapors, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Keep away from heat and sources of ignition - No smoking. See Section 8 for information on Personal Protective Equipment, (PPE)

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### 7.2 Conditions for safe storage, including any incompatibilities

Store locked up and in original container only. Keep container in a dry and well-ventilated place. Keep cool and protect from sunlight. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children. This product should be used within 24 months of the date of manufacture.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### CAS: 64-19-7 Acetic acid

NIOSH (US): 10 ppm, (ST) 15 ppm REL inhalation; 15 ppm, 37 mg/m<sup>3</sup> ST inhalation; 10 ppm, 25 mg/m<sup>3</sup> TWA inhalation; US/OSHA (US): 10 ppm PEL inhalation; 25 mg/m<sup>3</sup> PEL inhalation

#### CAS: 7722-84-1 Hydrogen peroxide

NIOSH (US): 1 ppm REL inhalation; US/OSHA (US): 1 ppm PEL inhalation; 1.4 mg/m<sup>3</sup> PEL inhalation

### 8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures below recommended exposure limits.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Pictograms



#### Eye/face protection

Safety glasses or goggles.

#### Skin protection

Protective gloves rubber/latex/neoprene. Do not use leather or cotton gloves.

#### Body protection

Wear protective clothing. Clothing with full length sleeves and pants should be worn. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

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## SECTION 9: Physical and chemical properties

Physical state	Liquid
Appearance	Clear, colorless liquid.
Color	Colorless
Odor	Vinegar-like
Melting point/freezing point	-30°C (-22°F)
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	> 55 °C SADT > 55°C (131°F)
pH	<1.5
Kinematic viscosity	No data available.
Solubility	Complete.
Partition coefficient n-octanol/water (log value)	No data available.

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Vapor pressure	22 mm Hg (25C)
Density and/or relative density	9.18 lbs/gal
Relative vapor density	No data available.

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Contact with incompatible materials. Sources of ignition. Exposure to heat.

#### 10.2 Chemical stability

Stable under normal storage conditions.

#### 10.3 Possibility of hazardous reactions

No data available.

#### 10.4 Conditions to avoid

Incompatible products. High temperatures. Direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

#### 10.5 Incompatible materials

Hydrogen peroxide: Zinc, Powdered metals, Iron, Copper, Nickel, Brass, Iron and iron salts.

Acetic acid: Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

#### 10.6 Hazardous decomposition products

Thermal decomposition generates corrosive vapors, acetic acid and oxygen which supports combustion.

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### SECTION 11: Toxicological information

#### Acute toxicity

Acetic acid

LD50 Oral - Rat - 3,310 mg/kg, LC50 Inhalation - Mouse - 5620 ppm - 1 h, LC50 Inhalation - Rat - 11.4 mg/l – 4h

LD50 Skin - Rat - 1,112 mg/kg

#### Skin corrosion/irritation

Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, or blistering.

#### Serious eye damage/irritation

Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, or significantly impaired vision.

#### Respiratory or skin sensitization

May cause respiratory tract irritation.

#### Germ cell mutagenicity

No data available.

#### Carcinogenicity

No data available.

#### Reproductive toxicity

No data available.

#### Specific target organ toxicity (STOT) - single exposure

No data available.

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### Specific target organ toxicity (STOT) - repeated exposure

No data available.

### Aspiration hazard

No data available.

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## SECTION 12: Ecological information

### Toxicity

Acetic acid

LC50 - *Oncorhynchus mykiss* (rainbow trout) - >1,000 mg/l - 96 h

EC50 - *Daphnia magna* (water flea) - >300.82 mg/l - 48 h

### Persistence and degradability

Peracetic acid is completely miscible with water. Product is biodegradable due to chemical properties.

### Bioaccumulative potential

Does not bioaccumulate.

### Mobility in soil

Non-significant adsorption soil degradation, >99% in 20 minutes.

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## SECTION 13: Disposal considerations

### Product disposal

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

### Packaging disposal

Dispose of as unused product. Do not reuse containers.

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## SECTION 14: Transport information

### DOT (US)

UN Number: UN3149

Class: 5.1 (8)

Packing Group: II

Proper Shipping Name: Hydrogen peroxide and peroxyacetic acid mixtures, stabilized with acids, water, and not more than 5 percent peroxyacetic acid

### IMDG

UN Number: UN3149

Class: 5.1 (8)

Packing Group: II

Proper Shipping Name: Hydrogen peroxide and peroxyacetic acid mixtures, stabilized with acids, water, and not more than 5 percent peroxyacetic acid

### IATA

UN Number: UN3149

Class: 5.1 (8)

Packing Group: II

Proper Shipping Name: Hydrogen peroxide and peroxyacetic acid mixtures, stabilized with acids, water, and not more than 5 percent peroxyacetic acid

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## SECTION 15: Regulatory information

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### 15.1 Safety, health and environmental regulations specific for the product in question

#### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:  
Hydrogen peroxide

#### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard for: Hydrogen peroxide.  
Fire Hazard, Acute Health Hazard, Chronic Health Hazard for: Acetic acid.

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### US EPA TSCA public inventory

Chemical name: PERACETIC ACID  
CAS number: 79-21-0  
Chemical name: Hydrogen peroxide  
CAS number: 7722-84-1  
Chemical name: Acetic acid  
CAS number: 64-19-7

#### FIFRA

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

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## SECTION 16: Other information

### 16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall BioSafe Systems be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if BioSafe Systems has been advised of the possibility of such damages.