



Date : 08/20/18

Version : 1.0

# SAFETY DATA SHEET

## CES pH Down™

### Section 1. Identification

**GHS product identifier** : CES pH Down™

**Other means of identification** : Not available

**Product type** :

#### Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Not available.

**Supplier's details** : Cutting Edge Solutions, LLC  
1572 Hampton way, Santa Rosa, CA 95407

**Emergency telephone number** : 1-800-222-1222

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SKIN CORROSION - Category 2  
SERIOUS EYE DAMAGE - Category 1

#### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H314 - Causes severe skin burns and eye damage.

#### Precautionary statements

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.  
P264 - Wash hands thoroughly after handling.

**Response** : P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.  
P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.

## Section 2. Hazards identification

P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Storage** : P405 - Store locked up.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

### CAS number/other identifiers

**CAS number** : Not available.

**Product code** : Not available.

Ingredient name	%	CAS number
Phosphoric acid	≥10 - ≤25	7664-38-2
Citric acid	≥5 - ≤10	77-92-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

**Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.

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

#### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns.  
**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

## Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides
- Special protective actions for fire-fighters** : No special precaution is required.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

Ingredient name	Exposure limits
Phosphoric acid	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. STEL: 3 mg/m <sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 10/2013).</b> TWA: 1 mg/m <sup>3</sup> 10 hours. STEL: 3 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 2/2013).</b> TWA: 1 mg/m <sup>3</sup> 8 hours.
Citric acid	None.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid.
Color	: Colorless.
Odor	: Odorless.
Odor threshold	: Not available.
pH	: 1.2
Melting point	: -8°C (17.6°F)
Boiling point	: 104°C (219.2°F)
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: 2.3 kPa (17.5 mm Hg) [room temperature]
Vapor density	: Not available.
Relative density Solubility	: 1.13
Partition coefficient: n-octanol/water	: Soluble in water.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (room temperature): 0.01 cm <sup>2</sup> /s (1 cSt)

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Citric acid	LD50 Oral	Rat	3 g/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Citric acid	Eyes - Severe irritant	Rabbit	-	24 hours 750 µg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitization

There is no data available.

### Mutagenicity

There is no data available.

### Carcinogenicity

There is no data available.

### Reproductive toxicity

There is no data available.

### Teratogenicity

There is no data available.

### Specific target organ toxicity (single exposure)

There is no data available.

### Specific target organ toxicity (repeated exposure)

There is no data available.

### Aspiration hazard

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns.  
**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

## Section 11. Toxicological information

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

### Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	58027.1 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Citric acid	Acute LC50 160000 µg/L Marine water	Crustaceans - Carcinus maenas - Adult	48 hours

### Persistence and degradability

There is no data available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Citric acid	-1.8	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : There is no data available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations




**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed



## Section 13. Disposal considerations

out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	IMDG	IATA
<b>UN number</b>	UN3264	UN3264	UN3264
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid) RQ (Phosphoric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)
<b>Transport hazard class(es)</b>	8 	8 	8 
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	No.	No.	No.
<b>Additional information</b>	<b>Reportable quantity</b> 24630.5 lbs / 11182.3 kg [2614.2 gal / 9895.8 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	<b>Emergency schedules (EmS)</b> F-A, S-B	-

**AERG** : 154

**DOT-RQ Details** : Phosphoric acid 5000 lbs / 2270 kg [315.62 gal / 1194.7 L]

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are listed or exempted.  
**Clean Water Act (CWA) 311:** Phosphoric acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

## Section 15. Regulatory information

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Immediate (acute) health hazard

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Phosphoric acid	≥10 - ≤25	No.	No.	No.	Yes.	No.
Citric acid	≥5 - ≤10	No.	No.	No.	Yes.	No.

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>			
<b>Supplier notification</b>			

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**California Prop.** : None of the components are listed.

**65**

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
SKIN CORROSION - Category 2 SERIOUS EYE DAMAGE - Category 1	On basis of test data On basis of test data

### History

**Date of issue** : 08/20/18  
**Version** : 1.0

### Notice to reader/ Disclaimer


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# SAFETY DATA SHEET (SDS)

## ZeroTol<sup>®</sup> 2.0

<b>Form #:</b>	SDS-069
<b>Revision Date:</b>	12/09/2019
<b>Revision #:</b>	05
<b>Supersedes Date:</b>	03/20/2019

Section 1: Identification			
<b>Product Name:</b>	ZeroTol <sup>®</sup> 2.0	<b>Product Type / Description:</b>	Bactericide / Fungicide
<b>Recommended Use:</b>	Bactericide / Fungicide for commercial use.	<b>Other Means of Identification:</b>	Peracetic Acid Solution, Peroxyacetic Acid Solution, PAA
<b>Use Restrictions:</b>	It is a violation of federal law to use this product in a manner inconsistent with its labeling.	<b>Chemical Formula:</b>	CH <sub>3</sub> CO <sub>3</sub> H
<b>Manufacturer:</b>	<b>BioSafe Systems, LLC</b> 22 Meadow Street   East Hartford, CT 06108	<b>EPA Registration #:</b>	70299-12
<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>
Oxidizing Liquid: Category 2 Acute Toxicity Oral: Category 4 Dermal: Category 4 Inhalation: Category 4 Skin Corrosion/Irritation: Category 1A Serious Eye Damage/Eye Irritation: Category 1	H272: May intensify fire, oxidizer. H302: Harmful if swallowed. H312: Harmful in contact with skin. H314: Causes severe skin burns and eye damage. H318: Causes serious eye damage. H332: Harmful if inhaled. H335: May cause respiratory irritation.
<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. P102: Keep out of reach of children. P103: Read label before use.	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/shower. P304+P340: IF INHALED: Move 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. P310: Immediately call a POISON CENTER/doctor. P321: For specific treatments see FIRST AID section on SDS or label. P363: Wash contaminated clothing before reuse. P370+P378: In case of fire: Use water or other suitable extinguishing media. P390: Absorb spillage to prevent material damage.
<b>Prevention</b>	<b>Storage / Disposal</b>
P210: Keep away from heat, sparks or open flames, no smoking. P220: Keep away from combustible materials. P221: Take any precautions to avoid mixing with combustibles. P234: Keep only in original container. P260: Do not breathe fumes, mist or vapors. P262: Do not get in eyes, on skin or on clothing. P264: Wash 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, clothing, eye protection, face protection.	P405: Store locked up. P406: Store in corrosive resistant container, never use metal containers. P410: Protect from sunlight. P411: Store at temperatures not exceeding 55°C (131°F). P420: Store away from incompatible materials.  P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

# SAFETY DATA SHEET (SDS)

## ZeroTol<sup>®</sup> 2.0

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### Section 3: Composition / Information on Ingredients

Components	CAS-No	% Composition (w/w)
Hydrogen Peroxide	7722-84-1	24.39 – 29.82%
Peroxyacetic Acid	79-21-0	1.8 – 2.2%
Acetic Acid	64-19-7	3.98 – 4.86%

### Section 4: First-Aid Measures

<b>Eye Contact:</b>	In case of eye contact, remove contact lenses and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. See a medical doctor immediately.
<b>Skin Contact:</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek immediate medical attention/advice.
<b>Ingestion:</b>	Rinse mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately. If swallowed, do not induce vomiting - seek medical advice.
<b>Inhalation:</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician if necessary.
<b>Notes to Physician:</b>	This product can be corrosive to skin, eyes, and mucous membranes. Careful gastric lavage should be considered. Observations may be warranted. Treatment is controlled removal of exposure followed by supportive care.

### 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>	Corrosive vapors, acetic acid, 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>	Oxidizing agents, strong reducing agents, combustible materials, heavy metals.
<b>Compatible Materials:</b>	304L Stainless Steel, 316L Stainless Steel, Passivated Aluminum; High Density Polyethylene (HDPE), Polyvinyl Chloride (PVC)

### Section 8: Exposure Controls / Personal Protection

Components with Workplace Control Parameters			
Component	ACGIH	NIOSH	OSHA
Acetic Acid	TWA: 10 ppm STEL: 15 ppm	TWA: 25 mg/m <sup>3</sup> - 8 hours. TWA: 10 ppm - 8 hours. IDLH: 50 ppm	TWA: 25 mg/m <sup>3</sup> - 8 hours. TWA: 10 ppm - 8 hours.
Hydrogen Peroxide	TWA: 1 ppm	TWA: 1.4 mg/m <sup>3</sup> - 8 hours. TWA: 1 ppm - 8 hours. IDLH: 75 ppm	TWA: 1.4 mg/m <sup>3</sup> - 8 hours. TWA: 1 ppm - 8 hours.
Peracetic Acid	STEL: 0.4 ppm		

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<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.
<b>Personal Protective Equipment</b>	
<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. Recommended respirators are those with an organic vapor / acid gas cartridge.
<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 non-combustible clothing and footwear (PVC, neoprene, nitrile or natural rubber).

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>	1.10 – 1.12 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>	Reactive and oxidizing agent.
<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>	3622 mg/kg	<b>Dermal LD50 Rabbit:</b>	1040 mg/kg
<b>Inhalation LC50 Rat:</b>	4 hr – 5350 mg/m <sup>3</sup>		
Symptoms and Effects			
Condition	Acute Effects	Chronic (Delayed) Effects	
<b>Eye Contact:</b>	Causes serious eye damage.	None.	
<b>Skin Contact:</b>	Causes severe skin burns.	None.	
<b>Inhalation:</b>	May cause respiratory tract irritation.	None.	
<b>Ingestion:</b>	Probable mucosal damage.	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>Daphnia magna</i>	126.8 mg/L
<b>Persistence and Degradability:</b>	Peracetic acid is completely miscible with water. Product is biodegradable due to chemical properties.		
<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.

# SAFETY DATA SHEET (SDS)

## ZeroTol<sup>®</sup> 2.0

Form #:	SDS-069
Revision Date:	12/09/2019
Revision #:	05
Supersedes Date:	03/20/2019

### Section 14: Transport Information

UN Number	UN Proper Shipping Name	Hazard Class (Subsidiary)	Packing Group	IATA	Marine Pollutant
DOT 3149	Hydrogen peroxide and Peroxyacetic acid mixture, with acid(s), water and not more than 5% Peroxyacetic acid, stabilized	5.1 (8)	II	Not permitted for shipment by air.	No
TDG 3149	Hydrogen peroxide and Peroxyacetic acid mixture, with acid(s), water and not more than 5% Peroxyacetic acid, stabilized	5.1 (8)	II		
IMDG 3149	Hydrogen peroxide and Peroxyacetic acid mixture, with acid(s), water and not more than 5% Peroxyacetic acid, stabilized	5.1 (8)	II		
<b>Special Precautions:</b>		Shipping container: UN certified vented polyethylene			
<b>Shipping Placards:</b>		 			

### 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 <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 <b>Health:</b> Acute Toxicity; Skin Corrosion or Irritation; Serious Eye Damage or Eye Irritation; Specific target organ toxicity	Yes	10000 lbs.
<i>*Hydrogen Peroxide Reportable Quantity only applies to concentrations &gt; 52%</i>					
<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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<b>NFPA 704 Rating</b>	<b>Health:</b>	<b>2</b>	<b>Flammability:</b>	<b>0</b>	<b>Reactivity:</b>	<b>1</b>	<b>Special:</b>	OX (Oxidizer)
<b>HMIS Rating</b>	<b>Health:</b>	<b>2</b>	<b>Flammability:</b>	<b>0</b>	<b>Physical:</b>	<b>2</b>	<b>PPE:</b>	Recommended. (H)
<b>Uniform Fire Code (NFPA 400)</b>	Oxidizer, Class 2, Liquid							