

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : TSUNAMI 100

Other means of identification : Not applicable

Recommended use : Sanitizer

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.0036 % - 0.95 %

Company : Ecolab Inc.  
1 Ecolab Place  
St. Paul, Minnesota USA 55102  
1-800-352-5326

Emergency health information : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 08/08/2023

**SECTION 2. HAZARDS IDENTIFICATION**
**GHS Classification**
**Product AS SOLD**

Oxidizing liquids : Category 3

Organic peroxides : Type F

Acute toxicity (Oral) : Category 3

Skin corrosion : Category 1A

Serious eye damage : Category 1

**Product AT USE DILUTION**

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2B

**GHS label elements**
**Product AS SOLD**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Heating may cause a fire.  
May intensify fire; oxidizer.  
Toxic if swallowed.  
Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**  
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective

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clothing/ eye protection/ face protection.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. 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/ doctor. Wash contaminated clothing before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

Store locked up. Protect from sunlight. Store at temperatures not exceeding .? °C/ .? °F. Keep cool. Store away from other materials.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

#### Product AT USE DILUTION

Hazard pictograms



Signal Word

: Warning

Hazard Statements

: Harmful if swallowed.  
Causes eye irritation.

Precautionary Statements

: **Prevention:**

Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response:**

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

#### Product AS SOLD

Other hazards

: Do not mix with bleach or other chlorinated products – will cause chlorine gas.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Product AS SOLD

Pure substance/mixture

: Mixture

Chemical name	CAS-No.	Concentration (%)
Acetic acid	64-19-7	30 - 60
Peroxyacetic acid	79-21-0	15.2
Hydrogen peroxide	7722-84-1	11.2

#### Product AT USE DILUTION

Chemical name	CAS-No.	Concentration (%)
Peroxyacetic acid	79-21-0	0.1444
Hydrogen peroxide	7722-84-1	0.1064

No hazardous ingredients

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### SECTION 4. FIRST AID MEASURES

#### Product AS SOLD

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention immediately.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Product AT USE DILUTION

- In case of eye contact : Rinse with plenty of water.
- In case of skin contact : Rinse with plenty of water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Product AS SOLD

- Suitable extinguishing media : Water
- Unsuitable extinguishing media : Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Specific hazards during fire fighting : Special protective equipment for fire-fighters  
Oxidizer. Contact with other material may cause fire.  
On decomposition, releases oxygen which may intensify fire.  
Oxidizer; material is an oxidizer which may readily react with other materials, especially upon heating.  
In case of a fire, if it is possible without risk, remove all containers exposed to the fire and store them in a safe place, away from any source of heat.  
Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : Decomposition products may include the following materials:  
Carbon oxides

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Nitrogen oxides (NO<sub>x</sub>)  
Sulfur oxides  
Oxides of phosphorus

- Special protective equipment for fire-fighters : In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Product AS SOLD

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Move all flammable sources out of danger and keep them away from the scene. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water. DO NOT hermetically seal any defective containers, including drums (risk of bursting due to the decomposition of the product)
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Isolate the waste do not allow it to come into contact with incompatible materials. For small spills contain with sand or vermiculite and dilute the contained product at least 10 times with water. Transfer to an open topped container and remove to a safe place for neutralization\* / disposal. For large spills contain spill and evacuate the area, leave until the reaction subsides, then collect up for disposal. Obtain consent from the local water company / authority if considering discharge to sewer. \*NEUTRALIZATION : once diluted, neutralize with a suitable alkali such as sodium bicarbonate. Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

### Product AT USE DILUTION

- Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

## SECTION 7. HANDLING AND STORAGE

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#### Product AS SOLD

Advice on safe handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Conditions for safe storage : Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from strong bases. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers. Pressure bursts may occur due to gas evolution if the container is not adequately vented. Do not hermetically seal the container. Always transport and store the containers upright. Risk of overpressure and bursting in the event of decomposition in closed containers and in pipes.

Storage temperature : -10 °C to 50 °C

#### Product AT USE DILUTION

Advice on safe handling : Do not ingest. Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Product AS SOLD

##### Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm 25 mg/m <sup>3</sup>	NIOSH REL
		ST	15 ppm 37 mg/m <sup>3</sup>	NIOSH REL
		TWA	10 ppm 25 mg/m <sup>3</sup>	OSHA P0
Peracetic acid	79-21-0	STEL	0.4 ppm	ACGIH
Hydrogen peroxide	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1.4 mg/m <sup>3</sup>	NIOSH REL
		TWA	1 ppm 1.4 mg/m <sup>3</sup>	OSHA P0

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Wear eye protection and/or face protection.

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of

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degradation or chemical breakthrough.

- Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

#### Product AT USE DILUTION

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Personal protective equipment

- Eye protection : No special protective equipment required.
- Hand protection : No special protective equipment required.
- Skin protection : No special protective equipment required.
- Respiratory protection : No personal respiratory protective equipment normally required.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Color	: colorless	colorless
Odor	: vinegar-like	vinegar-like
pH	: 1.8, (100 %)	2.8 - 4.6
Flash point	: 96 °C closed cup, Does not sustain combustion.	
Odor Threshold	: No data available	
Melting point/freezing point	: No data available	
Initial boiling point and boiling range	: > 100 °C	
Evaporation rate	: No data available	
Flammability (solid, gas)	: Not applicable	
Upper explosion limit	: No data available	
Lower explosion limit	: No data available	
Vapor pressure	: No data available	
Relative vapor density	: No data available	
Relative density	: 1.114	
Water solubility	: soluble	
Solubility in other solvents	: No data available	
Partition coefficient: n-	: No data available	

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octanol/water

Autoignition temperature : No data available

Thermal decomposition : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : The substance or mixture is classified as oxidizing with the category 3.

Molecular weight : No data available

VOC : No data available

### SECTION 10. STABILITY AND REACTIVITY

#### Product AS SOLD

Reactivity : Decomposes on heating. Potential for exothermic hazard.

Chemical stability : Decomposes on heating.  
pressure build-up  
Contamination may result in dangerous pressure increases - closed containers may rupture.

Possibility of hazardous reactions : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Conditions to avoid : Direct sources of heat.  
Exposure to sunlight.

Incompatible materials : Metals  
Reducing agents  
Flammable materials

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Sulfur oxides  
Oxides of phosphorus

### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

#### Product AS SOLD

Eyes : Causes serious eye damage.

Skin : Causes severe skin burns.

Ingestion : Toxic if swallowed. Harmful if swallowed. Causes digestive tract burns.

Inhalation : Toxic if inhaled. May cause respiratory tract irritation. May cause nose, throat, and lung irritation.

Chronic Exposure : Health injuries are not known or expected under normal use.

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#### Product AT USE DILUTION

Eyes	: Causes eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Harmful if swallowed.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.

#### Experience with human exposure

##### Product AS SOLD

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough Respiratory irritation, Cough

#### Product AT USE DILUTION

Eye contact	: Redness, Irritation
Skin contact	: No symptoms known or expected.
Ingestion	: No information available.
Inhalation	: No symptoms known or expected.

#### Toxicity

##### Product AS SOLD

##### Product

Acute oral toxicity	: Acute toxicity estimate : 100 mg/kg
Acute inhalation toxicity	: 4 h Acute toxicity estimate : 9.04 mg/l Test atmosphere: dust/mist
Acute dermal toxicity	: Acute toxicity estimate : 2,219 mg/kg
Skin corrosion/irritation	: Corrosive
Respiratory or skin sensitization	: No data available
Carcinogenicity	: No data available
Reproductive effects	: No data available
Germ cell mutagenicity	: No data available
Teratogenicity	: No data available
STOT-single exposure	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT-repeated exposure	: No data available
Aspiration toxicity	: No data available



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### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Product AS SOLD

Environmental Effects : Toxic to aquatic life.

##### Product AT USE DILUTION

Environmental Effects : This product has no known ecotoxicological effects.

##### Product AS SOLD

##### Product

Toxicity to fish : 96 h LC50 Pimephales promelas: 12.31 mg/l  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : 48 h LC50 Daphnia magna (Water flea): 4.36 mg/l

Toxicity to algae : No data available

#### Components

Toxicity to algae : Acetic acid  
72 h EC50 Skeletonema costatum (marine diatom): > 1,000 mg/l

Peroxyacetic acid  
72 h EC50: 0.7 mg/l

Hydrogen peroxide  
72 h EC50 Skeletonema costatum (marine diatom): 1.38 mg/l

#### Persistence and degradability

##### Product AT USE DILUTION

Not applicable - inorganic

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

No data available

### SECTION 13. DISPOSAL CONSIDERATIONS

##### Product AS SOLD

Disposal methods : Do not contaminate ponds, waterways or ditches with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

RCRA - Resource Conservation and Recovery : D002 (Corrosive)

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Authorization Act Hazardous waste

### Product AT USE DILUTION

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

## SECTION 14. TRANSPORT INFORMATION

### Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

UN number : 3109

Description of the goods : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid)

Class : 5.2 (8)

Environmentally hazardous : no

#### Sea transport (IMDG/IMO)

UN number : 3109

Proper shipping name : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid)

Class : 5.2 (8)

Marine pollutant : no

## SECTION 15. REGULATORY INFORMATION

### Product AS SOLD

EPA Registration number : 1677-164

#### EPCRA - Emergency Planning and Community Right-to-Know

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic acid	64-19-7	5000	15711

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Peroxyacetic acid	79-21-0	500	3282

**SARA 311/312 Hazards** : Oxidizer (liquid, solid or gas)  
Organic peroxides

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Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

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

Peroxyacetic acid	79-21-0	15.2 %
Hydrogen peroxide	7722-84-1	11.2 %

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Peroxyacetic acid	79-21-0	15.2 %
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#### California Prop. 65

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

#### California Cleaning Product Right to Know Act of 2017 (SB 258)

This regulation does not apply to this product.

#### The ingredients of this product are reported in the following inventories:

##### Switzerland. New notified substances and declared preparations :

On the inventory, or in compliance with the inventory

##### United States TSCA Inventory :

Listed on TSCA

##### Canadian Domestic Substances List (DSL) :

All components of this product are on the Canadian DSL

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :

On the inventory, or in compliance with the inventory

##### New Zealand. Inventory of Chemical Substances :

not determined

##### Japan. ENCS - Existing and New Chemical Substances Inventory :

On the inventory, or in compliance with the inventory

##### Korea. Korean Existing Chemicals Inventory (KECI) :

On the inventory, or in compliance with the inventory

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

On the inventory, or in compliance with the inventory

##### China. Inventory of Existing Chemical Substances in China (IECSC) :

On the inventory, or in compliance with the inventory

##### Taiwan Chemical Substance Inventory (TCSI) :

On the inventory, or in compliance with the inventory

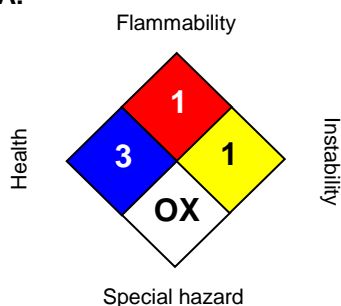
## SECTION 16. OTHER INFORMATION

Product AS SOLD

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### NFPA:



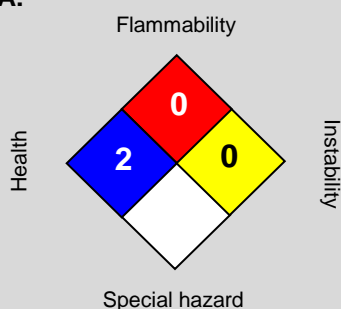
### HMIS III:

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

### Product AT USE DILUTION

### NFPA:



### HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Issuing date : 08/08/2023  
Version : 1.8  
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.