

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

1 Identification

- **Product identifier**
- **Trade name: MICROTOX ULTRA**
- **Article number: LPA24A**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



Flame

Org. Perox. F H242 Heating may cause a fire.



Flame over circle

Ox. Liq. 1 H271 May cause fire or explosion; strong oxidizer.



Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Flam. Liq. 4 H227 Combustible liquid.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 1)

- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labeling:**

peroxyacetic acid
acetic acid
hydrogen peroxide solution

- **Hazard statements**

Combustible liquid.
May cause fire or explosion; strong oxidizer.
Heating may cause a fire.
Harmful if swallowed, in contact with skin or if inhaled.
Causes severe skin burns and eye damage.

- **Precautionary statements**

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 out of reach of children.
Keep only in original container.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell. 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.
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.
If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO₂, powder or water spray.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Store in a well-ventilated place. Keep cool.
Store locked up.
Protect from sunlight.
Store at temperatures not exceeding 86°F. Keep cool.
Store away from other materials.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 2

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 2)

- **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	1	Fire = 1
REACTIVITY	2	Reactivity = 2

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

79-21-0	peroxyacetic acid	21-27%
64-19-7	acetic acid	36-42%
7722-84-1	hydrogen peroxide solution	7-13%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Take affected persons out into the fresh air.
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Remove to fresh air. In case of unconsciousness, immediately seek medical attention. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- **After skin contact:** Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.
- **After eye contact:** Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Cold water spray is the preferred extinguishing medium for all peroxyacetic acid related fires. If cold water spray is not available or accessible, CO₂, extinguishing powder, or alcohol resistant foam may be used.

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 3)

- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow to enter surface or ground water. Do not allow to penetrate the ground/soil. Dilute with plenty of water. Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
Dike with inert materials.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

79-21-0	peroxyacetic acid	0.52 mg/m ³
64-19-7	acetic acid	5 ppm
7722-84-1	hydrogen peroxide solution	10 ppm

- **PAC-2:**

79-21-0	peroxyacetic acid	1.6 mg/m ³
64-19-7	acetic acid	35 ppm
7722-84-1	hydrogen peroxide solution	50 ppm

- **PAC-3:**

79-21-0	peroxyacetic acid	15 mg/m ³
64-19-7	acetic acid	250 ppm
7722-84-1	hydrogen peroxide solution	100 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Handle product in a closed system and/or ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage:** ZEE Company recommends these guidelines for storage, maximum shelf life, and safety.
- **Requirements to be met by storerooms and receptacles:** Do not store in direct sunlight. Store in a cool, dry, well ventilated area. Keep this and all chemicals out of the reach of children.
- **Information about storage in one common storage facility:** Store away from flammable substances. Store away from reducing agents.
- **Further information about storage conditions:** For quality purposes, avoid temperatures in excess of 86°F. Elevated temperatures will accelerate decomposition resulting in loss of assay.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

- Store below 68°F to stay within Clean Air Act partial guidelines. Shelf life: 6 months at ideal storage conditions. (Contd. of page 4)

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

79-21-0 peroxyacetic acid

TLV	Short-term value: 1.24* mg/m ³ , 0.4* ppm *inhalable fraction + vapor
-----	---

64-19-7 acetic acid

PEL	Long-term value: 25 mg/m ³ , 10 ppm
REL	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
TLV	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm

7722-84-1 hydrogen peroxide solution

PEL	Long-term value: 1.4 mg/m ³ , 1 ppm
REL	Long-term value: 1.4 mg/m ³ , 1 ppm
TLV	Long-term value: 1.4 mg/m ³ , 1 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- **Breathing equipment:**

Not necessary if room is well-ventilated. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. Use suitable protective device with organic acid cartridge in case of insufficient ventilation.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

· Eye protection:

(Contd. of page 5)



Tightly sealed goggles

Body protection: Protective work clothing. Apron.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Pungent vinegar odor
Odor threshold:	Not determined.

· pH-value at 20 °C (68 °F): <2

· Change in condition

Freezing point:	-25°C (-13°F)
Boiling point/Boiling range:	105°C (221°F)

· Flash point: >55 °C (>131 °F)

· Flammability (solid, gaseous): Not applicable.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	No data available.
Upper:	No data available.

· Vapor pressure at 20 °C (68 °F): 11.25 mm Hg

· Density at 20 °C (68 °F): 1.131 g/cm³ (9.4382 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	39.3 %
VOC content:	39.25 %
	443.9 g/l / 3.70 lb/gal

Solids content: 0.0 %

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 6)

· Other information

No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

64-19-7 acetic acid		
Oral	LD50	3,310 mg/kg (rat)
Dermal	LD50	1,060 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7722-84-1	hydrogen peroxide solution	3
-----------	----------------------------	---

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 8)

-US-

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 7)

- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even small quantities leak into the ground.
 Very toxic for aquatic organisms
 Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Dispose of in accordance with federal, state, and local regulations.
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA | UN3109 |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA | Organic peroxide type F, liquid
ORGANIC PEROXIDE TYPE F, LIQUID |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | |
| <ul style="list-style-type: none"> · Class · Label · Class | 5.2 Organic peroxides
5.2
5.2 Organic peroxides |



(Contd. on page 9)

US

Safety Data Sheet


acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

(Contd. of page 8)

· Label	5.2
· IMDG, IATA	
	
· Class	5.2 Organic peroxides
· Label	5.2
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Organic peroxides
· Danger code (Kemler):	539
· EMS Number:	F-J,S-R
· Stowage Category	D
· Stowage Code	SW1 Protected from sources of heat.
· Segregation Code	SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis. SG72 See 7.2.6.3.2.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 10 L On cargo aircraft only: 25 L
· UN "Model Regulation":	UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID, 5.2, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Clean Air Act (CAA) -- Accidental Release Prevention:** Peracetic acid is listed as a Regulated Toxic Substance at 40 CFR 68.130. Pursuant to the threshold determination provisions for mixtures at 40 CFR 68.115(b)(1), the partial pressure of peracetic acid in MICROTOX products are less than 20 mm Hg at 25°C, and thus these products, as sold, are not subject to the threshold determination under the Risk Management Planning regulations.

· **Section 355 (extremely hazardous substances):**

79-21-0	peroxyacetic acid
7722-84-1	hydrogen peroxide solution

(Contd. on page 10)

-US-

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

Section 313 (Specific toxic chemical listings):	(Contd. of page 9)
--	--------------------

79-21-0	peroxyacetic acid
---------	-------------------

TSCA (Toxic Substances Control Act):	
---	--

79-21-0	peroxyacetic acid	ACTIVE
---------	-------------------	--------

64-19-7	acetic acid	ACTIVE
---------	-------------	--------

7722-84-1	hydrogen peroxide solution	ACTIVE
-----------	----------------------------	--------

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
--

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
--

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
--

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

7722-84-1	hydrogen peroxide solution	A3
-----------	----------------------------	----

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).
--

Hazard pictograms



Signal word Danger

Hazard-determining components of labeling:

peroxyacetic acid

acetic acid

hydrogen peroxide solution

Hazard statements

Combustible liquid.

May cause fire or explosion; strong oxidizer.

Heating may cause a fire.

Harmful if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.
--

Precautionary statements

Keep out of reach of children.

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.

Do not breathe dusts or mists.

Wash thoroughly after handling.

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2019

Reviewed on 05/17/2019

Trade name: MICROTOX ULTRA

Do not eat, drink or smoke when using this product. (Contd. of page 10)

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear fire/flame resistant/retardant clothing.

If swallowed: Call a poison center/doctor if you feel unwell. 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.

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.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Take off contaminated clothing and wash it before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protect from sunlight.

Store at temperatures not exceeding 86°F. Keep cool.

Store away from other materials.

Dispose of contents/container in accordance with local/regional/national/international regulations.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Jim Faller
- **Date of preparation / last revision** 05/17/2019 / 6
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Flam. Liq. 4: Flammable liquids – Category 4
 - Ox. Liq. 1: Oxidizing liquids – Category 1
 - Org. Perox. F: Organic peroxides – Type E/F
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- *** Data compared to the previous version altered.**