VENTUM BIOTECH

VENTUM ONE-TOUCH™

Revision Date Feb. 22, 2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name — VENTUM® ONE-TOUCH™
- Synonyms — Peracetic acid
- FIFRA Registration number — 68660-11
- Molecular formula — CH_3-COOOH

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

Uses of the Substance / Mixture

- Pesticide
- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- Contact your supplier for additional information

1.3 Details of the supplier of the safety data sheet

Company

Ventum Biotech
Cap Omega
Rond-Point Benjamin Franklin
34000 Montpellier,
France
Tel: +33 4 67 75 56 12; +1 (646) 450-4582

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Oxidizing liquids, Category 2	H272: May intensify fire; oxidizer.
Corrosive to Metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation. (Respiratory system)

2.2 Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram

Signal Word

- Danger

Hazard Statements

- H272	May intensify fire; oxidizer.
- H290	May be corrosive to metals.
- H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
- H314	Causes severe skin burns and eye damage.
- H335	May cause respiratory irritation.

Precautionary Statements

Prevention

- P210	Keep away from heat.
- P220	Keep/Store away from clothing/ combustible materials.
- P221	Take any precaution to avoid mixing with combustibles.
- P234	Keep only in original container.
- P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- 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.

Response

- P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
- 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 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
- 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/ doctor.
- P363	Wash contaminated clothing before reuse.
- P370 + P378	In case of fire: Use water spray to extinguish.
- P390	Absorb spillage to prevent material damage.

Storage

- P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
- P405	Store locked up.
- P406	Store in corrosive resistant container with a resistant inner liner.

Disposal

- P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- H401: Toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

- Synonyms: Peracetic acid, Peroxyethanoïc acid, PAA
- Formula: CH3-COOOH

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Hydrogen peroxide (H2O2)	7722-84-1	>= 20 - < 25
Acetic acid	64-19-7	>= 5 - < 10
Ethaneperoxoic acid	79-21-0	>= 5 - < 10
Alcohols, C9-11, ethoxylated	68439-46-3	>= 1 - < 5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1 Description of first-aid measures

In case of inhalation

- Move to fresh air.
- Oxygen or artificial respiration if needed.
- Victim to lie down in the recovery position, cover and keep him warm.
- Call a physician immediately.

In case of skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off immediately with plenty of water.
- Keep warm and in a quiet place.
- Call a physician or poison control center immediately.
- Wash contaminated clothing before re-use.

In case of eye contact

- Call a physician or poison control center immediately.
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Take victim immediately to hospital.

In case of ingestion

- Call a physician or poison control center immediately.
- Take victim immediately to hospital.
- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.
- Artificial respiration and/or oxygen may be necessary.

4.2 Most important symptoms and effects, both acute and delayed

In case of inhalation

Symptoms

- Breathing difficulties

- Cough
- Chemical pneumonitis
- pulmonary edema

Effects
- Severe respiratory irritant

Repeated or prolonged exposure

- Nose bleeding
- Risk of chronic bronchitis

In case of skin contact

Symptoms
- Redness
- Swelling of tissue
- Burn

Effects
- Corrosive

In case of eye contact

Symptoms
- Redness
- Lachrymation
- Swelling of tissue
- Burn

Effects
- Corrosive
- May cause irreversible eye damage.

In case of ingestion

Symptoms
- Nausea
- Abdominal pain
- Bloody vomiting
- Diarrhea
- Suffocation
- Cough
- Severe shortness of breath

Effects
- If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
- Risk of respiratory disorder

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- Take victim immediately to hospital.
- Immediate medical attention is required.
- Consult with an ophthalmologist immediately in all cases.
- Burns must be treated by a physician.
- If swallowed
- Avoid gastric lavage (risk of perforation).
- Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

Flash point	Method: closed cup No flash up to boiling point
Autoignition temperature	No data available
Flammability / Explosive limit	No data available

5.1 Extinguishing media

Suitable extinguishing media

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Water
- Water spray

Unsuitable extinguishing media

- None.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- May cause fire or explosion; strong oxidizer.
- Oxygen released in thermal decomposition may support combustion

Hazardous combustion products:

- Oxygen

5.3 Advice for firefighters

Special protective equipment for fire-fighters

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.
- Wear chemical resistant oversuit
- Cool containers/tanks with water spray.
- Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel

- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.

Advice for emergency responders

- Use personal protective equipment.
- Drying of this product on clothing or combustible materials may cause fire.
- Keep wetted with water.
- Prevent further leakage or spillage.
- Keep away from incompatible products

6.2 Environmental precautions

- Discharge into the environment must be avoided.

- Do not flush into surface water or sanitary sewer system.
- In case of accidental release or spill, immediately notify the appropriate authorities if required by Federal, State/Provincial and local laws and regulations.

6.3 Methods and materials for containment and cleaning up

- Dam up.
- Soak up with inert absorbent material.
- Do not let product enter drains.
- Keep in suitable, closed containers for disposal.
- Keep in properly labeled containers.

6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only in well-ventilated areas.
- Before all operations, passivate the piping circuits and vessels according to the procedure recommended by the producer.
- Use only clean and dry utensils.
- Never return unused material to storage receptacle.
- May not get in touch with:
- Organic materials
- Keep away from heat.
- Keep away from incompatible products

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Store in original container.
- Keep tightly closed in a dry, cool and well-ventilated place.
- Keep in properly labeled containers.
- Keep in a contained area
- Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- Electrical equipment should be protected to the appropriate standard.
- Keep away from:
- Incompatible products
- OP Storage (Burning Rate) Type IV according to the BGV B4 test method

Packaging material

Suitable material

- Stainless steel cleaned and passivated
- Approved grades of HDPE.

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Components with workplace occupational exposure limits

Components	Value type	Value	Basis
Hydrogen peroxide (H2O2)	TWA	1 ppm 1.4 mg/m3	National Institute for Occupational Safety and Health
Hydrogen peroxide (H2O2)	TWA	1 ppm	American Conference of Governmental Industrial Hygienists
Hydrogen peroxide (H2O2)	TWA	1 ppm 1.4 mg/m3	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
	The value in m /m3 is approximate.		
Acetic acid	TWA	10 ppm 25 mg/m3	National Institute for Occupational Safety and Health
	Can be found in concentrations of 5-8% in vinegar		
Acetic acid	ST	15 ppm 37 mg/m3	National Institute for Occupational Safety and Health
	Can be found in concentrations of 5-8% in vinegar		
Acetic acid	TWA	10 ppm	American Conference of Governmental Industrial Hygienists
Acetic acid	STEL	15 ppm	American Conference of Governmental Industrial Hygienists
Acetic acid	TWA	10 ppm 25 mg/m3	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
	The value in m /m3 is approximate.		
Ethaneperoxoic acid	STEL	0.4 ppm	American Conference of Governmental Industrial Hygienists
	Form of exposu re : Inhalable fracti n and vapor		

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)

Components	CAS-No.	Concentration
Hydrogen peroxide (H2O2)	7722-84-1	75 parts per million
Acetic acid	64-19-7	50 parts per million

8.2 Exposure controls

Control measures

Engineering measures
- Provide adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection
- In case of insufficient ventilation, wear suitable respiratory equipment.
- Respirator with a vapor filter (EN 141)
- Recommended Filter type: ABEK-P2

Hand protection
- Impervious gloves
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Suitable material
- butyl-rubber
- Break through time: > 480 min
- Glove thickness: >= 0.4 mm

Eye protection
- Chemical resistant goggles must be worn.

- If splashes are likely to occur, wear:
- Tightly fitting safety goggles
- Face-shield

Skin and body protection
- Apron/boots of butyl rubber if risk of splashing.

Hygiene measures
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Appearance	Physical state: liquid Color: colorless
Odor	pungent
Odor Threshold	No data available
pH	< 2.0 pKa: 8.2 (77 °F (25 °C))
Melting point/freezing point	ca. -44 °F (-42 °C) Method: Calculation method
Initial boiling point and boiling range	Boiling point/boiling range: ca. 221 °F (105 °C) Method: Calculation method
Flash point	Method: closed cup No flash up to boiling point
Evaporation rate (Butylacetate = 1)	No data available
Flammability (solid, gas)	Not applicable
Flammability (liquids)	The product is not flammable., Heating may cause a fire.
Flammability / Explosive limit	Explosiveness: Not explosive
Autoignition temperature	No data available
Vapor pressure	ca. 24 mmHg (32 hPa) (77 °F (25 °C)) Method: Calculation method
Vapor density	No data available
Density	Bulk density: Not applicable
Relative density	1.1
Solubility	Water solubility: completely miscible Solubility in other solvents: common organic solvents : soluble Aromatic solvents : slightly soluble
Partition coefficient: n-octanol/water	log Pow: -1.25 Method: Calculation method log Pow: -0.52 Method: measured value
Decomposition temperature	>= 140 °F (>= 60 °C) Self-Accelerating decomposition temperature (SADT)
Viscosity	No data available

Explosive properties No data available

Oxidizing properties The substance or mixture is classified as oxidizing with the category 2.
Oxidizer

9.2 Other information

Henry's Constant 22 Pa.m3 / mol
not significant, Air, Volatility

Corrosion of Metals Corrosive to metals

SECTION 10: Stability and reactivity

10.1 Reactivity

- Decomposes on heating.
- Heating may cause a fire.
- Potential for exothermic hazard

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- Contact with combustible material may cause fire.
- Contact with flammables may cause fire or explosions.
- Risk of explosion if heated under confinement.
- Fire or intense heat may cause violent rupture of packages.

10.4 Conditions to avoid

- Contamination
- To avoid thermal decomposition, do not overheat.

10.5 Incompatible materials

- Acids
- Bases
- Metals
- Heavy metal salts
- Powdered metal salts
- Reducing agents
- Organic materials
- Flammable materials

10.6 Hazardous decomposition products

- Oxygen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	LD50 : 1,922 mg/kg - Rat Test substance: 5 % PAA mixture
Acute inhalation toxicity	LC50 - 4 h (dust/mist) 4 mg/l - Rat Test substance: 5 % PAA mixture This product is classified as acute toxicity category 4
Acute dermal toxicity	LD50 Dermal 1,147 mg/kg - Rabbit Test substance: 5 % PAA mixture This product is classified as acute toxicity category 4
Acute toxicity (other routes of administration)	No data available
Skin corrosion/irritation	Rabbit Causes burns.
Serious eye damage/eye irritation	Rabbit Causes serious eye damage.

Respiratory or skin sensitization

Hydrogen peroxide (H2O2)	Does not cause skin sensitization.
Ethaneperoxoic acid	Maximization Test - Guinea pig Does not cause skin sensitization. Method: OECD Test Guideline 406 Unpublished reports
Alcohols, C9-11, ethoxylated	Does not cause skin sensitization. category approach Published data

Mutagenicity

Genotoxicity in vitro	In vitro tests have shown mutagenic effects.
Genotoxicity in vivo	Animal testing did not show any mutagenic effects.
Carcinogenicity	No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA

Toxicity for reproduction and development

Toxicity to reproduction / fertility	No toxicity to reproduction
Developmental Toxicity/Teratogenicity	Rat Test substance, 15 % PAA mixture, No effect observed on development, Published data

STOT

STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.

Ingestion 13 weeks - Rat
NOAEL: 0.75 mg/kg
Test substance: Peracetic acid

Oral 90-day - Mouse
NOAEL: 100 ppm
Test substance: Hydrogen peroxide

Inhalation 90-day - Rat
NOAEL: 7 ppm
Test substance: Hydrogen peroxide

Experience with human exposure

Experience with human exposure : Inhalation

No data available

Experience with human exposure : Ingestion

No data available

CMR effects

Carcinogenicity

Acetic acid — No evidence of carcinogenicity in animal studies.

Mutagenicity

Acetic acid — Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Aspiration toxicity — Not applicable

Further information — No data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish

Hydrogen peroxide (H_2O_2)

LC50 - 96 h : 16.4 mg/l - Pimephales promelas (fathead minnow)
semi-static test
Analytical monitoring: yes

Method: according to a standardized method
Harmful to fish.
Unpublished internal reports

Acetic acid

LC50 - 96 h : > 300 mg/l - Oncorhynchus mykiss (rainbow trout)
semi-static test
Analytical monitoring: no

Method: OECD Test Guideline 203
Not harmful to fish (LC/LL50 > 100 mg/L)
Unpublished reports

Ethaneperoxoic acid	LC50 - 96 h : 1.1 mg/l - Lepomis macrochirus (Bluegill sunfish) semi-static test Analytical monitoring: yes Unpublished reports Toxic to fish.

Acute toxicity to daphnia and other aquatic invertebrates

Hydrogen peroxide (H2O2)	EC50 - 48 h : 2.4 mg/l - Daphnia pulex (Water flea) semi-static test Analytical monitoring: yes Method: according to a standardized method Toxic to aquatic invertebrates. Unpublished internal reports
Acetic acid	EC50 - 48 h : > 300 mg/l - Daphnia magna (Water flea) semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 Not harmful to aquatic invertebrates. (EC/EL50 > 100 mg/L) Unpublished reports
Ethaneperoxoic acid	EC50 - 48 h : 0.73 mg/l - Daphnia magna (Water flea) semi-static test Analytical monitoring: yes Unpublished reports Very toxic to aquatic invertebrates.

Toxicity to aquatic plants

Hydrogen peroxide (H2O2)	ErC50 - 72 h : 2.62 mg/l - Skeletonema costatum (marine diatom) static test Analytical monitoring: yes Method: according to a standardized method Toxic to algae. Unpublished internal reports
Acetic acid	ErC50 - 72 h : > 300 mg/l - Skeletonema costatum (marine diatom) static test Analytical monitoring: no Method: OECD Test Guideline 201 Not harmful to algae (EC/EL50 > 100 mg/L) Unpublished reports ErC10 - 72 h : 300 mg/l - Skeletonema costatum (marine diatom) static test Analytical monitoring: yes Endpoint: Growth rate Method: OECD Test Guideline 201 No adverse chronic effect observed up to and including the threshold of 1 mg / L. Unpublished reports
Ethaneperoxoic acid	ErC50 - 72 h : 0.16 mg/l - Pseudokirchneriella subcapitata (green algae) static test Analytical monitoring: yes Unpublished internal reports Very toxic to algae.

Toxicity to microorganisms

Hydrogen peroxide (H2O2)	EC50 - 0.5 h : 466 mg/l - activated sludge static test Analytical monitoring: yes Method: OECD Test Guideline 209 Unpublished internal reports
Acetic acid	static test NOEC - 16 h : 1,150 mg/l - Pseudomonas putida semi-static test Analytical monitoring: no Published data
Ethaneperoxoic acid	EC50 - 3 h : 5.1 mg/l - activated sludge static test Analytical monitoring: yes Method: OECD Test Guideline 209 Unpublished internal reports

Chronic toxicity to fish

Ethaneperoxoic acid	NOEC: 0.00069 mg/l - 33 Days - Danio rerio (zebra fish) flow-through test Analytical monitoring: yes Method: OECD Test Guideline 210 Unpublished internal reports Very toxic to fish with long lasting effects.
Alcohols, C9-11, ethoxylated	NOEC: 1.5 mg/l - Fish No adverse chronic effect observed up to and including the threshold of 1 mg / L. Published data

Chronic toxicity to daphnia and other aquatic invertebrates

Hydrogen peroxide (H2O2)	NOEC: 0.63 mg/l - 21 Days - Daphnia magna (Water flea) flow-through test Analytical monitoring: yes Method: according to a standardized method Harmful to aquatic invertebrates with long lasting effects. Published data
Ethaneperoxoic acid	NOEC: 0.0121 mg/l - 21 Days - Daphnia magna (Water flea) flow-through test Analytical monitoring: yes Unpublished internal reports Toxic to aquatic invertebrates with long lasting effects.
Alcohols, C9-11, ethoxylated	EC10: 2.58 mg/l - Daphnia magna (Water flea) Reproduction Test No adverse chronic effect observed up to and including the threshold of 1 mg / L. Published data

M-Factor

Ethaneperoxoic acid	Acute aquatic toxicity = 1 Chronic aquatic toxicity = 10 (according to the Globally Harmonized System (GHS))

12.2 Persistence and degradability

Abiotic degradation	No data available
Physical- and photo-chemical elimination	No data available

Biodegradation

Biodegradability	aerobic Biodegradable Effects on waste water treatment plants Inhibitor Method: Abiotic degradation

Degradability assessment

Hydrogen peroxide (H2O2)	The product is considered to be rapidly degradable in the environment
Acetic acid	The product is considered to be rapidly degradable in the environment
Ethaneperoxoic acid	The product is considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

Hydrogen peroxide (H2O2)	Not potentially bioaccumulable
Acetic acid	Not potentially bioaccumulable
Ethaneperoxoic acid	Not potentially bioaccumulable
Bioconcentration factor (BCF)	Does not bioaccumulate.

12.4 Mobility in soil

Adsorption potential (Koc)	Water soluble mobile Soil/sediments non-significant adsorption

Known distribution to environmental compartments

Hydrogen peroxide (H2O2)	Ultimate destination of the product: Water
Ethaneperoxoic acid	Ultimate destination of the product: Water

12.5 Results of PBT and vPvB assessment	This mixture contains no substance considered to be persistent, bioaccumulating, and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard	According to the available data on the components Toxic to aquatic life. According to the classification criteria for mixtures. Unpublished reports Published data
Long-term (chronic) aquatic hazard	According to the available data on the components Very toxic to aquatic life with long lasting effects. According to the classification criteria for mixtures. Unpublished reports Published data

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Contact manufacturer.
- Contact waste disposal services.
- In accordance with local and national regulations.

Advice on cleaning and disposal of packaging

- Empty containers.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Where possible recycling is preferred to disposal or incineration.
- In accordance with local and national regulations.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT

14.1 UN number	UN 3149
14.2 Proper shipping name	
14.3 Transport hazard class	5.1
Subsidiary hazard class	8
Label(s)	5.1 (8)
14.4 Packing group	
Packing group	II
ERG No	140
14.5 Environmental hazards	NO
Marine pollutant	

TDG

14.1 UN number	UN 3149
14.2 Proper shipping name	
14.3 Transport hazard class	5.1
Subsidiary hazard class	8
Label(s)	5.1 (8)
14.4 Packing group	
Packing group	II
ERG No	140
14.5 Environmental hazards	YES
Marine pollutant	

NOM

14.1 UN number	UN 3149
14.2 Proper shipping name	
14.3 Transport hazard class	5.1
Subsidiary hazard class	8
Label(s)	5.1 (8)
14.4 Packing group	
Packing group	II
ERG No	140
14.5 Environmental hazards	YES
Marine pollutant	

IMDG

14.1 UN number	UN 3149
14.2 Proper shipping name	
14.3 Transport hazard class	5.1
Subsidiary hazard class	8
Label(s)	5.1 (8)
14.4 Packing group	
Packing group	II
14.5 Environmental hazards	YES
Marine pollutant	
14.6 Special precautions for user	
EmS	F-H , S-Q

For personal protection see section 8.

14.7 Transport in bulk vessels according to IMO instruments
No data available

IATA

14.1 UN number	UN 3149
14.2 Proper shipping name	
14.3 Transport hazard class	5.1
Subsidiary hazard class:	8
Label(s):	5.1 (8)
14.4 Packing group	
Packing group	II
Packing instruction (cargo aircraft)	554
Max net qty / pkg	5.00 L
Packing instruction (passenger aircraft)	550
Max net qty / pkg	1.00 L
14.5 Environmental hazards	YES

14.6 Special precautions for user
For personal protection see section 8.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- All components are listed on the NZIOC inventory. The HSNO status of the product has not been assessed.

EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- When purchased from a Ventum legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.

15.2 Federal Regulations

US. EPA EPCRA SARA Title III

SARA Hazard Designation Sections 311/312 (40 CFR 370)

Oxidizer (liquid, solid or gas)	Yes
Corrosive to Metals	Yes
Acute toxicity (any route of exposure)	Yes
Skin corrosion or irritation	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	Yes

The categories not mentioned are not relevant for the product.

Section 313 Toxic Chemicals (40 CFR 372.65)

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

Components	CAS-No.	Concentration
Ethaneperoxoic acid	79-21-0	5- 10%

Components	CAS-No.	Threshold planning quantity	Remarks
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb	Form: >52-100%
Ethaneperoxoic acid	79-21-0	500 lb	

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Components	CAS-No.	Reportable quantity
Acetic acid	64-19-7	5000 lb

Calculated RQ exceeds reasonably attainable upper limit.

FIFRA INFORMATION

EPA Registration Number: 68660-11

15.3 State Regulations

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

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

SECTION 16: Other information

NFPA (National Fire Protection Association) - Classification

Health	3 serious
Flammability	1 slight
Instability or Reactivity	2 moderate
Special Notices	OX Oxidizer

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	3 serious
Flammability	1 slight
Reactivity	2 moderate
PPE	Determined by User; dependent on local conditions

Further information

- Distribute new edition to clients

Date Prepared: 06/25/2020

Key or legend to abbreviations and acronyms used in the safety data sheet

- ST: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- STEL: Short-term exposure limit
- TWA: 8-hour, time-weighted average
- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- BHOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this 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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.