ECO MULTIPURPOSE DISINFECTANT, Concentrated, 4 L

Version	Revision Date:	SDS Number:	Date of last issue: 06/09/2022
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SECTION 1. IDENTIFICATION

Product name : ECO MULTIPURPOSE DISINFECTANT, Concentrated, 4 L

Product code : 893.139614

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:
CHEMTREC (24/7): 1-800-424-9300
Transport related emergencies:
CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:
CHEMTREC (24/7): 1-800-424-9300
Urgences liées au transport:
CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Cleaning agent

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin irritation : Category 2

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary Statements :

Prevention:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves, eye protection and face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
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.
P332 + P313 If skin irritation occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Hydrogen peroxide	Hydrogen peroxide solution ...%	7722-84-1	>= 5 - < 8 *
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Benzalkonium chloride	68424-85-1	>= 1 - < 5 *
Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides	Didecyldimethylammonium chloride (DDAC (C8-10))	68424-95-3	>= 1 - < 5 *
Dimethyldioctylammonium chloride	1-Octanaminium, N,N-dimethyl-N-octyl-, chloride (1:1)	5538-94-3	>= 0.1 - < 1 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention immediately.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes skin irritation. Causes serious eye damage.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion prod-	:	Carbon oxides

ucts		Nitrogen oxides (NOx) Chlorine compounds
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Keep tightly closed.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
Gases

Storage period : 12 Months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrogen peroxide	7722-84-1	TWA	1 ppm 1.4 mg/m³	CA AB OEL
		TWA	1 ppm	CA BC OEL
		TWAEV	1 ppm	CA QC OEL
		TWA	1 ppm	ACGIH

Engineering measures : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined inorganic gas/vapor and organic vapor type

Hand protection
Material : Rubber gloves

Material : Latex gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of

		workday. Breakthrough time is not determined for the product. Change gloves often!
Eye protection	:	Wear the following personal protective equipment: Chemical resistant goggles must be worn. If splashes are likely to occur, wear: Face-shield
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	clear
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	3 - 3.5
Melting point/freezing point	:	0 °C
Initial boiling point and boiling range	:	100 °C
Flash point	:	100 - < 200 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available

Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	18.665 hPa (22 °C)
Relative vapor density	:	No data available
Relative density	:	1.02
Density	:	1.015 g/cm³ (20 °C)
Bulk density	:	1.020 kg/m³
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	1 mm²/s (22 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

Hydrogen peroxide:

Acute oral toxicity	:	Acute toxicity estimate: 495.5 mg/kg Method: Expert judgment
Acute inhalation toxicity	:	Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment Remarks: Based on national or regional regulation.
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Acute oral toxicity	:	LD50 (Rat): 344 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.25 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): 3,412.5 mg/kg

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Acute oral toxicity	:	LD50 (Rat): > 50 - 300 mg/kg Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Remarks: Based on data from similar materials

Dimethyldioctylammonium chloride:

Acute oral toxicity : LD50 (Rat): 238 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): 170.3 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:

Hydrogen peroxide:

Species : Rabbit
Method : Draize Test
Result : Corrosive after 3 minutes or less of exposure

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Corrosive after 3 minutes to 1 hour of exposure
Remarks : Based on data from similar materials

Dimethyldioctylammonium chloride:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Corrosive after 4 hours or less of exposure
Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Hydrogen peroxide:

Species : Rabbit
Result : Irreversible effects on the eye
Method : Draize Test

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Result	:	Irreversible effects on the eye
Remarks	:	Based on skin corrosivity.

Dimethyldioctylammonium chloride:

Species	:	Rabbit
Result	:	Irreversible effects on the eye
Method	:	OECD Test Guideline 405
Remarks	:	Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

Dimethyldioctylammonium chloride:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OPPTS 870.2600
Result	:	negative
Remarks	:	Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrogen peroxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: positive

Test Type: In vitro mammalian cell gene mutation test
Result: positive

Test Type: Chromosome aberration test in vitro
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Test Type: Chromosome aberration test in vitro
Species: Mouse
Application Route: Intraperitoneal injection
Result: positive

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Ingestion
Result: positive

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Dimethyldioctylammonium chloride:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 475
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Components:

Hydrogen peroxide:

Species : Rat
Application Route : Ingestion
Exposure time : 18 Months
Result : negative

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	2 Years
Method	:	OECD Test Guideline 453
Result	:	negative

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Method	:	OECD Test Guideline 453
Result	:	negative
Remarks	:	Based on data from similar materials

Dimethyldioctylammonium chloride:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	24 Months
Method	:	OECD Test Guideline 453
Result	:	negative
Remarks	:	Based on data from similar materials

Reproductive toxicity

Not classified based on available information.

Components:

Hydrogen peroxide:

Effects on fertility	:	Test Type: Fertility/early embryonic development Species: Mouse Application Route: Ingestion Result: negative

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative Test Type: Embryo-fetal development Species: Rabbit Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Dimethyldioctylammonium chloride:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

Components:

Hydrogen peroxide:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Species : Dog
NOAEL : 45 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Method : OECD Test Guideline 409

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Species	:	Rat
NOAEL	:	> 12.5 mg/kg
Application Route	:	Ingestion
Exposure time	:	104 Weeks
Method	:	OECD Test Guideline 453
Remarks	:	Based on data from similar materials

Dimethyldioctylammonium chloride:

Species	:	Rat, male
NOAEL	:	256 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 453
Remarks	:	Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Hydrogen peroxide:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 16.4 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia pulex (Water flea)): 2.4 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 1.38 mg/l Exposure time: 72 h NOEC (Skeletonema costatum (marine diatom)): 0.63 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.63 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.515 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.016 mg/l Exposure time: 48 h Method: Directive 67/548/EEC, Annex V, C.2.
Toxicity to algae/aquatic plants	:	ErC50 (Selenastrum capricornutum (green algae)): 0.049 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Selenastrum capricornutum (green algae)): 0.009 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.032 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.013 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: 7.75 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0.1 - 1 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0.01 - 0.1 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.01 - 0.1 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials EC10 (Pseudokirchneriella subcapitata (green algae)): > 0.01 - 0.1 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0.1 - 1 mg/l Exposure time: 21 d Remarks: Based on data from similar materials

Dimethyldioctylammonium chloride:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0.1 - 1 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0.01 - 0.1 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 0.01 - 0.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOEC (Pseudokirchneriella subcapitata (green algae)): > 0.001 - 0.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): > 0.01 - 0.1 mg/l Exposure time: 33 d Method: OECD Test Guideline 210 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0.01 - 0.1 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
Toxicity to microorganisms	:	NOEC: > 1 - 10 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

Persistence and degradability

Components:

Hydrogen peroxide:

Biodegradability	:	Result: rapidly degradable Biodegradation: > 99 % Exposure time: 30 min

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 95.5 % Exposure time: 28 d Method: OECD Test Guideline 301B

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301B
Remarks: Based on data from similar materials

Dimethyldioctylammonium chloride:

Biodegradability : Result: rapidly degradable
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Hydrogen peroxide:

Partition coefficient: n-octanol/water : log Pow: -1.57
Remarks: Calculation

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 79
Exposure time: 35 d

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: < 4

Dimethyldioctylammonium chloride:

Partition coefficient: n-octanol/water : log Pow: 1.2

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides)
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

TDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides)

Class	:	9
Packing group	:	III
Labels	:	9
ERG Code	:	171
Marine pollutant	:	yes(Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides)

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

Volatile organic compounds (VOC) content

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products
VOC content: 0 g/l
Remarks: VOC content excluding water and exempt compounds

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

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA QC OEL / TWAEV	:	Time-weighted average exposure value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and

Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	11/11/2022
Date format	:	mm/dd/yyyy

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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