SECTION 1. IDENTIFICATION

Product name : HYPEROX

Product code : 000000000062261573

Other means of identification : No data available

Manufacturer or supplier's details

Company : LANXESS Canada Co.
Product Safety and Regulatory Affairs
25 Erb Street
Elmira, Canada N3B 2J3

Responsible Department : YLXS-YADD00000000052
+1800LANXESS

Emergency telephone : In an emergency, CANUTEC may be called collect at:
613.996.6666 (24 hrs)
*666 cellular (Canada only)

Recommended use of the chemical and restrictions on use

Recommended use : Oxidizing agents
Industrial use

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations (WHMIS 2015).

Organic peroxides : Type G

Corrosive to Metals : Category 1

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May be corrosive to metals.
Harmful if swallowed, in contact with skin or if inhaled.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary Statements :

Prevention:

Keep only in original packaging.
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin 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.

Response:

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. 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.
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.
Take off contaminated clothing and wash it before reuse.
Absorb spillage to prevent material damage.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
hydrogen peroxide	7722-84-1	>= 10 - < 30
acetic acid	64-19-7	>= 5 - < 10
peracetic acid	79-21-0	>= 1 - < 5
Sulfonic acids, C13-17-sec-alkane, sodium salts	85711-69-9	>= 1 - < 5

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

SECTION 4. FIRST AID MEASURES

If inhaled : Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
If unconscious, place in recovery position and get medical attention immediately.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Maintain open airway.
Loosen tight clothing such as a collar, tie, belt or waistband.

In case of skin contact : Get medical attention immediately.
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Continue to rinse for 30 minutes.
Chemical burns must be treated promptly by a physician.
Wash contaminated clothing before reuse.

In case of eye contact : Get medical attention immediately.
In case of contact, flush eyes with plenty of water for at least 30 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.
Remove contact lenses, if present and easy to do. Continue rinsing.
Chemical burns must be treated promptly by a physician.

If swallowed : Rinse mouth with water.
Do not induce vomiting unless directed to do by medical personnel.
If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
If unconscious, place in recovery position and get medical attention immediately.
Never give anything by mouth to an unconscious person.

Maintain open airway.

Most important symptoms and effects, both acute and delayed

Symptoms	:	Eye: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. Skin: Reddening, burning, and possible permanent damage. Inhalation may provoke the following symptoms: May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Ingestion: Corrosive with symptoms of coughing, burning, ulceration, and pain. Ingestion: May cause burns to mouth, throat, and stomach. Acute overexposure to this product may cause dizziness, headache, drowsiness, malaise, abdominal pain.
Effects	:	Harmful if swallowed, in contact with skin or if inhaled. Causes serious eye damage. May cause respiratory irritation. Causes severe burns.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses. Heating may cause a fire. Hazardous decomposition products may form under conditions of use.
Hazardous combustion products	:	Carbon dioxide (CO_2) Carbon monoxide
Further information	:	Fight fire remotely due to the risk of explosion. If this is impossible, withdraw from area and allow fire to burn.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protection equipment. Do not touch or walk through spilled material. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Do not breathe vapors, aerosols. Remove all sources of ignition. In case of inadequate ventilation wear respiratory protection.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Move containers from spill area. Wash spillages into an effluent treatment plant or proceed as follows. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Dispose of wastes in an approved waste disposal facility. Do not allow into the sewerage system, surface waters or groundwater or into the soil. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Contaminated absorbent material may pose the same hazard as the spilled product. Use spark-proof tools and explosion-proof equipment.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Avoid inhalation, ingestion and contact with skin and eyes. Use only with adequate ventilation/personal protection. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Use only in an area containing explosion proof equipment.
Temperature control may be required.
Do not use sparking tools.
Avoid exposure - obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid contact with combustible materials (wood, paper, oil, clothing etc.).

Conditions for safe storage : To avoid the risk of formation of shock-sensitive crystals or loss of stability, it is important to store the product within the temperature range.
Temperature control may be required.
Store in accordance with local regulations.
Store in a segregated and approved area.
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.
Keep away from sources of ignition - No smoking.
Keep away from alkalis.
Keep in a cool, well ventilated place away from reducing agents.
Keep away from combustible material.
Keep container closed when not in use.
Prevent product contamination.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers.
Use appropriate container to avoid environmental contamination.
Empty containers retain residue and can be dangerous.
Do not reuse container.
See NFPA 430, Code for the Storage of Liquid and Solid Oxidizers.
Do not store in unlined carbon steel containers as this product will corrode carbon steel and other metals, causing the generation of hydrogen gas (flammable). Carbon steel or metal containers must have a complete polyethylene liner on sides, top and bottom. Stainless steel (316 SS) tanks and containers are corrosion-resistant and may be used with this product, even when unlined. Repack only into approved containers.
To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap.

Recommended storage temperature : < 40 °C

Further information on storage stability : Stable under recommended storage conditions.

Packaging material : Unsuitable material: Do not store in or use iron or steel containers.

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	TWAEV	1 ppm 1.4 mg/m3	CA QC OEL
		TWA	1 ppm	ACGIH
acetic acid	64-19-7	TWAEV	10 ppm 25 mg/m3	CA QC OEL
		STEV	15 ppm 37 mg/m3	CA QC OEL
		TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
peracetic acid	79-21-0	STEL (Inhalable fraction and vapor)	0.4 ppm	ACGIH

Engineering measures : Use only with adequate ventilation.
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Use explosion-proof ventilating equipment.

Personal protective equipment

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize exposure.

Hand protection
Material : Polychloroprene - CR
Wearing time : < 60 min

Material : Nitrile rubber - NBR
Wearing time : < 60 min

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves. After contamination with product change the gloves immediately and dispose

of them according to relevant national and local regulations
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection	:	Tightly fitting safety goggles If inhalation hazards exist, a full-face respirator may be required instead.
Skin and body protection	:	Permeation resistant clothing and foot protection.
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Appropriate techniques should be used to remove potentially contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Physical state	:	liquid
Color	:	colorless
Odor	:	Pungent smelling.
Odor Threshold	:	No data available
pH	:	0.2 Concentration: 100 %
Melting point/freezing point	:	-61 - -60 °C
Boiling point/boiling range	:	Decomposition: Decomposes below the boiling point.
Flash point	:	> 100 °C Method: closed cup unmeasurable
Evaporation rate	:	No data available
Self-ignition	:	No data available

Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	1.12 g/cm3 (20 °C) Method: OECD Test Guideline 109
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	435 °C
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	75 °C Method: UN-Test H.4
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	1.247 mm2/s (20 °C) Method: OECD Test Guideline 114
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Metal corrosion rate	:	Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	This product, in laboratory testing, neither detonates in the cavitated state nor deflagrates and only shows a low or no effect when heated under confinement, as well as low or no explosive power.
Chemical stability	:	Stable under normal conditions.

Possibility of hazardous reactions	:	Potential for exothermic hazard Potential for exothermic hazard If contaminated with impurities or incompatible substances, self-accelerated exothermic decomposition may occur. Decomposition in confined spaces and pipes may lead to over-pressure and bursting. Heating can release hazardous gases. Oxygen formation is possible. Decomposes on heating. Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: temperature increase high temperature Reactions may include the following: hazardous decomposition risk of causing fire
Conditions to avoid	:	Avoid sources of ignition. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. Temperatures greater than recommended storage temperature. Avoid contact with combustible material (paper, wool, oil).
Incompatible materials	:	Incompatible with bases. Metals Reducing agents Powdered metal salts Combustible substances Flammable materials organic solvent Oxidizing agents Strong acids and strong bases
Hazardous decomposition products	:	acetic acid

SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

Acute toxicity

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

Product:

Acute oral toxicity	:	LD50 (Rat, female): 1,859 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): 4.08 mg/l Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit, male and female): 1,147 mg/kg

Components:

hydrogen peroxide:

Acute oral toxicity : LD50 (Rat): > 500 mg/kg

Acute inhalation toxicity : LC0 (Rat, male and female): > 0.17 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rat): 4,060 mg/kg

acetic acid:

Acute oral toxicity : LD50 (Rat, male and female): 3,310 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 11.4 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
GLP: no

Acute dermal toxicity : LD50 (Rabbit): 1,060 mg/kg

peracetic acid:

Acute oral toxicity : LD50 (Rat, male and female): 73.2 mg/kg
Method: US EPA Test Guideline OPP 81-1

Acute inhalation toxicity : Assessment: The component/mixture is toxic after short term inhalation.

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Causes burns.

Components:

hydrogen peroxide:

Assessment : Irritating to skin.

acetic acid:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation
GLP : No information available.
Remarks : Aqueous solution

peracetic acid:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Causes burns.

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

hydrogen peroxide:

Assessment : Risk of serious damage to eyes.

acetic acid:

Species : Rabbit
Result : Irreversible effects on the eye
Method : OECD Test Guideline 405

peracetic acid:

Assessment : Risk of serious damage to eyes.

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Species : Rabbit
Result : Risk of serious damage to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

Components:

hydrogen peroxide:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.

acetic acid:

Assessment	:	Did not cause sensitization on laboratory animals.

peracetic acid:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

acetic acid:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Rat (male and female)
Application Route: Inhalation
Method: Regulation (EC) No. 440/2008, Annex, B.12
Result: negative
GLP: yes

peracetic acid:

Genotoxicity in vitro : Remarks: Not mutagenic in a standard battery of genetic toxicological tests.

Genotoxicity in vivo : Species: Mammalian-Animal
Method: Regulation (EC) No. 440/2008, Annex, B.22
Result: negative

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Genotoxicity in vitro : Remarks: Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

acetic acid:

Effects on fetal development : Species: Rabbit, female
Application Route: Oral
Dose: 1600 milligram per kilogram
Duration of Single Treatment: 13 d
General Toxicity Maternal: NOAEL: 1,600 mg/kg body weight
Embryo-fetal toxicity.: NOAEL: 1,600 mg/kg body weight
Method: Regulation (EC) No. 440/2008, Annex, B.31
Result: No adverse effects.

STOT-single exposure

May cause respiratory irritation.

Components:

hydrogen peroxide:

Assessment : May cause respiratory irritation.

peracetic acid:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

hydrogen peroxide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 16.4 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 2.4 mg/l
Exposure time: 48 h
Test Type: semi-static test
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 1.38 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Remarks: salt water

NOEC (Skeletonema costatum (marine diatom)): 0.63 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Remarks: salt water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.63 mg/l
Exposure time: 21 d
Remarks: Fresh water

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Fresh water

acetic acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 300.82 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 300.82 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): > 300.82 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: ISO 10253
GLP: yes
Remarks: salt water

Toxicity to microorganisms : NOEC (Pseudomonas putida): 1,150 mg/l
Exposure time: 16 h
Remarks: Fresh water

peracetic acid:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.53 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.73 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 0.16 mg/l
Exposure time: 72 h
Method: OPP 123-3 (Algal Toxicity, Tiers I and II)

GLP: yes
Remarks: Fresh water

NOEC (Pseudokirchneriella subcapitata (microalgae)): 0.061 mg/l
Exposure time: 72 h
Method: OPP 123-3 (Algal Toxicity, Tiers I and II)
GLP: yes
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): 0.002 mg/l
Exposure time: 33 Days
Method: OECD Test Guideline 210
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.012 mg/l
Exposure time: 21 Days
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 8.4 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 12.5 mg/l
Exposure time: 24 h
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 96 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Fresh water

NOEC (Desmodesmus subspicatus (green algae)): 5.3 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : EC50 (Oncorhynchus mykiss (rainbow trout)): 2.9 mg/l
Exposure time: 21 Days
Method: OECD Test Guideline 204
Remarks: Fresh water

Persistence and degradability

Components:

hydrogen peroxide:

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

acetic acid:

Biodegradability : Result: Readily biodegradable.

peracetic acid:

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Sulfonic acids, C13-17-sec-alkane, sodium salts:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Bioaccumulative potential

Components:

hydrogen peroxide:

Partition coefficient: n-octanol/water : log Pow: -1.1

acetic acid:

Partition coefficient: n-octanol/water : log Pow: -0.17

peracetic acid:

Partition coefficient: n-octanol/water : log Pow: -0.46 (25 °C)
pH: 5
Method: OPPTS 830.7550

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Empty containers retain product residue; observe all precautions for product. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3149
Proper shipping name	:	Hydrogen peroxide and peroxyacetic acid mixture stabilized
Class	:	5.1
Subsidiary risk	:	8
Packing group	:	II
Labels	:	5.1 8
	:	
Packing instruction (cargo aircraft)	:	554 : 5.00 L
Packing instruction (passenger aircraft)	:	550 : 1.00 L
Environmentally hazardous	:	yes
		

IMDG-Code

UN number	:	UN 3149
Proper shipping name	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID

MIXTURE, STABILIZED
(PERACETIC ACID)

Class : 5.1
Subsidiary risk : 8
Packing group : II
Labels : 5.1 8

EmS Code : F-H, S-Q
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 3149
Proper shipping name : HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE STABILIZED

Class : 5.1
Subsidiary risk : 8
Packing group : II
Labels : 5.1 8

ERG Code : 140
Marine pollutant : yes(PERACETIC ACID)

Product classified per Transportation of Dangerous Goods Regulations sections 2.23-2.25 (Class 5).
Product classified per Transportation of Dangerous Goods Regulations sections 2.40-2.42 (Class 8).
Product classified per Transportation of Dangerous Goods Regulations sections 2.7, 2.43-2.45 (Class 9).

Hazard and Handling Notes.
Oxidizing agent., Corrosive., Environmentally hazardous substance., Has an intense odour., Keep away from sources of heat., Keep away from foodstuffs, acids and alkalis

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

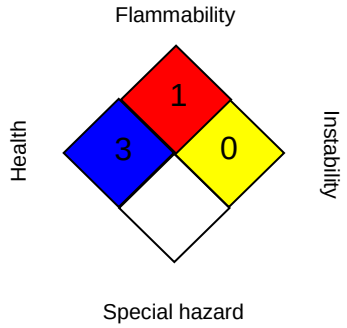
NPRI Components	:	peracetic acid sulphuric acid
TSCA	:	Not listed on TSCA Inventory, for R&D Use Only, Section 5 (h)(3) limitations apply.
DSL	:	All components of this product are on the Canadian DSL

Canadian lists

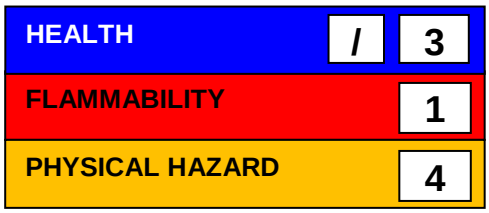
No substances are subject to a Significant New Activity Notification.

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

LANXESS' method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS as a customer service.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
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
ACGIH / STEL	:	Short-term exposure limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term 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

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The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.