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

1.1 Product identifier

Trade name : HYPEROX

Product code : 000000000062524731

UFI : GCAF-3098-600C-X5KN

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

Use of the Substance/Mixture : Professional use, Disinfectants

1.3 Details of the supplier of the safety data sheet

Company : Antec International Limited
Windham Road
CO10 2XD Sudbury / Suffolk
Chilton Industrial Estate, Great Britain

Responsible Department : +49 221 8885 2288
infosds@lanxess.com

1.4 Emergency telephone number

Emergency telephone number : For 24/7 multilingual emergency please call CHEMTREC EMEA: +44 20 3885 0382 and mention CCN1018725.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Organic peroxides, Type G	
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, Sub-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, Respiratory system	H335: May cause respiratory irritation.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :



Signal word : Danger

Hazard statements :

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.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH071 Corrosive to the respiratory tract.

Precautionary statements :

Prevention:

P261 Avoid breathing mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

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.
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.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Hazardous components which must be listed on the label:

hydrogen peroxide
acetic acid
peracetic acid
Sulfonic acids, C13-17-sec-alkane, sodium salts

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Causes severe digestive tract burns.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
hydrogen peroxide	7722-84-1 231-765-0 008-003-00-9	Ox. Liq. 1; H271 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412	>= 25 - < 30
acetic acid	64-19-7 200-580-7 607-002-00-6	Flam. Liq. 3; H226 Skin Corr. 1A; H314 Eye Dam. 1; H318	>= 5 - < 10
peracetic acid	79-21-0 201-186-8 607-094-00-8	Org. Perox. D; H242 Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071	>= 3 - < 5

		_____ M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 100 _____ Acute toxicity estimate Acute oral toxicity: 80 mg/kg Acute inhalation toxicity: 0.2 mg/l Acute dermal toxicity: 60 mg/kg	
Sulfonic acids, C13-17-sec-alkane, sodium salts	85711-69-9 288-330-3	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 3

Specific Concentration limits (Regulation (EC) No 1272/2008)

Chemical name	CAS-No. EC-No.	Classification	Concentration (%)
hydrogen peroxide	7722-84-1 231-765-0	Ox. Liq.1; H271 Ox. Liq.2; H272 Skin Corr.1A; H314 Skin Corr.1B; H314 Skin Irrit.2; H315 Eye Dam.1; H318 Eye Irrit.2; H319 STOT SE3; H335	>= 70 % 50 - < 70 % >= 70 % 50 - < 70 % 35 - < 50 % 8 - < 50 % 5 - < 8 % >= 35 %
acetic acid	64-19-7 200-580-7	Skin Corr.1A; H314 Skin Corr.1B; H314 Skin Irrit.2; H315 Eye Irrit.2; H319	>= 90 % 25 - < 90 % 10 - < 25 % 10 - < 25 %
peracetic acid	79-21-0 201-186-8	STOT SE3; H335	>= 1 %

For explanation of abbreviations see section 16.
Disclaimer: EC numbers starting with 1, 6, 7, 8, 9, or a letter in this document are ECHA List Numbers used for internal reference and do not carry legal significance as typical EC Numbers in Safety Data Sheets.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Symptoms of poisoning may appear several hours later.

The exposed person may need to be kept under medical surveillance for 48 hours.

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.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
No action shall be taken involving any personal risk or without suitable training.

If inhaled : Take victim immediately to hospital.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Keep patient warm and at rest.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Continue to rinse for at least 20 minutes.
Get medical attention immediately.
Wash contaminated clothing before reuse.

In case of eye contact : Take victim immediately to hospital.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
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.
Continue rinsing eyes during transport to hospital.
Protect unharmed eye.
Chemical burns must be treated promptly by a physician.

If swallowed : Take victim immediately to hospital.
Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
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.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	Harmful if swallowed, in contact with skin or if inhaled. Causes serious eye damage. May cause respiratory irritation. Causes severe burns. Corrosive to the respiratory tract.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Basic aid, decontamination, symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet organic compounds

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	May release toxic, irritating and/or corrosive gases. In a fire or if heated, a pressure increase will occur and the container may burst. Water runoff from fire fighting may be corrosive. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Peroxides Carbon dioxide (CO2) Carbon monoxide

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Full protective flameproof clothing
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers. Do not release chemically contaminated water into drains, soil or surface water. Fight fire remotely due to the risk of explosion. If this is impossible, withdraw from area and allow fire to burn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : No action shall be taken involving any personal risk or without suitable training.
Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material.
Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Evacuate personnel to safe areas.
Never return spills in original containers for re-use.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.
Do not flush into surface water or sanitary sewer system.
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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Large spills should be collected mechanically (remove by pumping) for disposal.
Non-sparking tools should be used.
Move containers from spill area.
Contaminated absorbent material may pose the same hazard as the spilled product.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapor, mist or aerosol.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Provide sufficient air exchange and/or exhaust in work rooms.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
Keep away from heat and sources of ignition.
Open drum carefully as content may be under pressure.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with skin, eyes and clothing. When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in accordance with local regulations. 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

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

Recommended storage temperature : <= 25 °C

Packaging material : Suitable material: Polyethylene, Polyvinylchloride, Polypropylene, Glass, porcelain or stoneware
Unsuitable material: Do not store in or use iron or steel containers., Copper, Brass, bronze, Aluminium, Zinc, Tin, Lead, Mild steel

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
hydrogen peroxide	7722-84-1	TWA	1 ppm	GB EH40

			1.4 mg/m3	
		STEL	2 ppm 2.8 mg/m3	GB EH40
acetic acid	64-19-7	STEL	20 ppm 50 mg/m3	GB EH40
		TWA	10 ppm 25 mg/m3	GB EH40
		TWA	10 ppm 25 mg/m3	2017/164/EU
	Further information: Indicative			
		STEL	20 ppm 50 mg/m3	2017/164/EU
	Further information: Indicative			

8.2 Exposure controls

Engineering measures

If user operations generate dust, fumes, gas, vapour 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.

Personal protective equipment

Eye/face protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material	:	Polychloroprene - CR
Break through time	:	> 480 min
Glove thickness	:	0.65 mm
Guideline	:	Protective gloves complying with EN 374.
Wearing time	:	< 60 min

Material	:	Natural rubber - NR
Break through time	:	> 480 min
Glove thickness	:	0.22 mm
Guideline	:	Protective gloves complying with EN 374.
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

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Wear respiratory equipment in case vapours and aerosols are emitted.
Use an approved air-purifying respirator.

Wear breathing apparatus with separate air supply (compressed air respirator, tube apparatus) at higher concentrations.

Filter type : ABEK-P3-filter

Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid
Physical state	:	liquid
Colour	:	colourless
Odour	:	Pungent smelling.
Odour 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
Flammability	:	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
Vapour pressure	:	No data available
Relative vapour density	:	No data available

Relative density	:	No data available
Density	:	1.13 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
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	1.247 mm2/s (20 °C) Method: OECD Test Guideline 114
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Self-Accelerating decomposition temperature (SADT)	:	> 75 °C Method: UN-Test H.4
Metal corrosion rate	:	Corrosive to metals
Particle size	:	No data available
Particle Size Distribution	:	No data available
Self-ignition	:	The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.

SECTION 10: Stability and reactivity

10.1 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.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : 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.

10.4 Conditions to avoid

Conditions to avoid : Exposure to sunlight.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Impurities
Metals
Metal salt.
Reducing agents
Bases
alkalis
Amines
Hydrocarbons
organic solvent
Combustible substances
Flammable materials
polymerisation initiators

10.6 Hazardous decomposition products

Hazardous decomposition products : acetic acid
Oxygen
Steam

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Product:

Acute oral toxicity : Acute toxicity estimate: 892.86 mg/kg
Method: Calculation method

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

Acute toxicity estimate: 2.42 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

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 : LC50 (Rat, male and female): > 0.17 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: equivalent or similar to OECD Guideline 403
GLP: Yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable 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: vapour
Method: OECD Test Guideline 403
GLP: No

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

peracetic acid:

Acute oral toxicity : Acute toxicity estimate: 80 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

LD50 (Rat, male and female): ca. 80 mg/kg
Method: equivalent or similar to OECD Guideline 401
GLP: Yes

Acute inhalation toxicity : Acute toxicity estimate: 0.2 mg/l
Test atmosphere: dust/mist
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

LC50 (Rat, male and female): ca. 0.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: Yes

Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : Acute toxicity estimate: 60 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

LD50 (Rabbit, male and female): ca. 60 mg/kg
Method: EPA OPP 81-2
GLP: Yes

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 : Corrosive after 3 minutes to 1 hour of exposure

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
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Corrosive after 3 minutes or less of exposure
GLP : Yes

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

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

peracetic acid:

Species	:	Rabbit
Method	:	In vivo eye irritation
Result	:	Risk of serious damage to eyes.
GLP	:	Yes

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

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

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Not classified due to lack of data.

Product:

Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

Components:

hydrogen peroxide:

Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitisation on laboratory animals.

acetic acid:

Assessment	:	Did not cause sensitisation on laboratory animals.

peracetic acid:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	Regulation (EC) No. 440/2008, Annex, B.6
Result	:	Not a skin sensitizer.
GLP	:	Yes

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

Exposure routes	:	Skin contact
Species	:	Guinea pig

Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified due to lack of data.

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 : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: equivalent or similar to OECD Guideline 471
Result: negative
GLP: No

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: Regulation (EC) No. 440/2008, Annex, B.17
Result: negative
GLP: Yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: Regulation (EC) No. 440/2008, Annex, B.10
Result: negative
GLP: Yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474

Result: negative
GLP: Yes

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 due to lack of data.

Reproductive toxicity

Not classified due to lack of data.

Components:

acetic acid:

Effects on foetal 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-foetal toxicity: NOAEL: 1,600 mg/kg body weight
Method: Regulation (EC) No. 440/2008, Annex, B.31
Result: No adverse effects

peracetic acid:

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Dose: 0 - 12,5 - 30,4 - 48,1 mg/kg bw/day
General Toxicity Maternal: NOAEL: 30.4 mg/kg bw/day
Developmental Toxicity: NOAEL: 30.4 mg/kg bw/day
Method: equivalent or similar to OECD Guideline 414
Result: Did not show teratogenic effects in animal experiments.
GLP: Yes

STOT - single exposure

May cause respiratory irritation.
Corrosive to the respiratory tract.

Components:

hydrogen peroxide:

Assessment : May cause respiratory irritation.

peracetic acid:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified due to lack of data.

Repeated dose toxicity

Components:

peracetic acid:

Species	:	Rat, male and female
NOAEL	:	23.4 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 408
GLP	:	Yes
Remarks	:	Subchronic toxicity

Aspiration hazard

Not classified due to lack of data.

Further information

Product:

Remarks	:	No data available

SECTION 12: Ecological information

12.1 Toxicity

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 microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.63 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
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 (Lepomis macrochirus (Bluegill sunfish)): 1.1 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: equivalent or similar to OECD Guideline 203
GLP: Yes
Remarks: Fresh water

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

Toxicity to algae/aquatic plants : EC50 (Raphidocelis subcapitata (freshwater green alga)): 0.05 mg/l

End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.031 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 0.00069 mg/l
Exposure time: 33 d
Species: Danio rerio (zebra fish)
Test Type: flow-through test
Method: OECD Test Guideline 210
GLP: Yes
Remarks: Fresh water
The value is calculated

M-Factor (Chronic aquatic toxicity) : 100

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: 2.9 mg/l
Exposure time: 21 Days
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 204
Remarks: Fresh water

12.2 Persistence and degradability

Components:

hydrogen peroxide:

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

acetic acid:

Biodegradability : Result: Readily biodegradable.

peracetic acid:

Biodegradability : Test Type: aerobic
Result: readily biodegradable, but failing 10-day window
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: No

Stability in water : Degradation half life (DT50): 31.7 h
pH: 7
Hydrolysis: at 25 °C

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

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

12.3 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:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: -0.26
pH: 7
Method: QSAR

log Pow: -0.46 (25 °C)
pH: 5
Method: OPPTS 830.7550

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f) at levels of 0.1% or higher.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number

ADN	:	UN 3149
ADR	:	UN 3149
RID	:	UN 3149
IMDG	:	UN 3149
IATA	:	UN 3149

14.2 UN proper shipping name

ADN	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
ADR	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
RID	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
IMDG	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
IATA	:	Hydrogen peroxide and peroxyacetic acid mixture stabilized

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	5.1	8
ADR	:	5.1	8
RID	:	5.1	8
IMDG	:	5.1	8
IATA	:	5.1	8

14.4 Packing group

ADN

Packing group	:	II	
Classification Code	:	OC1	
Hazard Identification Number	:	58	
Labels	:	5.1	8





ADR

Packing group	:	II	
Classification Code	:	OC1	
Hazard Identification Number	:	58	
Labels	:	5.1	8

:  

Tunnel restriction code : (E)

RID

Packing group : II
Classification Code : OC1
Hazard Identification Number : 58
Labels : 5.1 8
:
 

IMDG

Packing group : II
Labels : 5.1 8
:
 

EmS Code : F-H, S-Q

IATA (Cargo)

Packing instruction (cargo aircraft) : 554 : 5.00 L
Packing group : II
Labels : 5.1 8
:




IATA (Passenger)

Packing instruction (passenger aircraft) : 550 : 1.00 L
Packing group : II
Labels : 5.1 8
:




14.5 Environmental hazards

ADN

Environmentally hazardous : yes



ADR
Environmentally hazardous : yes



RID
Environmentally hazardous : yes



IMDG
Marine pollutant : yes



IATA (Passenger)
Environmentally hazardous : yes



IATA (Cargo)
Environmentally hazardous : yes



14.6 Special precautions for user

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.

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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Number on list 40: acetic acid
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors.	:	sulphuric acid
Council Regulation (EC) No 273/2004 on drug precursors	:	sulphuric acid
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation	:	Not applicable

Control of Major Accident Hazards Regulations 2015 (COMAH)

		Quantity 1	Quantity 2
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive

94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H242	:	Heating may cause a fire.
H271	:	May cause fire or explosion; strong oxidizer.
H272	:	May intensify fire; oxidizer.
H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H310	:	Fatal in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Flam. Liq.	:	Flammable liquids
Org. Perox.	:	Organic peroxides
Ox. Liq.	:	Oxidizing liquids
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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 as-

sociated with x% growth rate response; GHS - Globally Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

Further information

Classification of the mixture:		**Classification procedure:**
Org. Perox. G		Based on product data or assessment
Met. Corr. 1	H290	Based on product data or assessment
Acute Tox. 4	H302	Calculation method
Acute Tox. 4	H332	Calculation method
Acute Tox. 4	H312	Based on product data or assessment
Skin Corr. 1B	H314	Based on product data or assessment
Eye Dam. 1	H318	Based on product data or assessment
STOT SE 3	H335	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

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.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.