Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	:	TSUNAMI PA
UFI	:	G42F-5WQP-TH0P-7685
Product code	:	118525E
Use of the Substance/Mixture	:	Processing Aid
Substance type:	:	Mixture
		For professional users only.
Product dilution information	:	No dilution information provided.

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

Identified uses	:	Preservation and sanitation agent. Process water
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company	:	Ecolab a.s Innspurten 9 Postboks 6440-Etterstad, N-0605 Oslo Norway +47 22 68 18 00 NO-kundeservice@ecolab.com

1.4 Emergency telephone number

Emergency telephone number	:	+4785295496 +32-(0)3-575-5555 Trans-European
Poison Information Centre telephone number	:	+47 22 59 13 00

Date of Compilation/Revision : 16.12.2024
Version : 1.0

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Oxidizing liquids, Category 3	H272
Corrosive to metals, Category 1	H290
Acute toxicity, Category 4	H302
Acute toxicity, Category 4	H332
Skin corrosion, Category 1	H314

Serious eye damage, Category 1	H318
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335
Long-term (chronic) aquatic hazard, Category 1	H410

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements :

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H302 + H332	Harmful if swallowed 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:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/ doctor/ .?.

Hazardous components which must be listed on the label:
Acetic acid
Hydrogen peroxide
Peracetic acid

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
Acetic acid	64-19-7 200-580-7 01-2119475328-30	Nota B Flammable liquids Category 3; H226 Skin corrosion Sub-category 1A; H314 Serious eye damage Category 1; H318 Skin corrosion Category 1A H314 >= 90 % Skin corrosion Category 1B H314 25 - < 90 % Skin irritation Category 2 H315 10 - < 25 % Eye irritation Category 2 H319 10 - < 25 %	>= 25 - < 30
Hydrogen peroxide	7722-84-1 231-765-0 01-2119485845-22	Nota B Oxidizing liquids Category 1; H271 Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Skin corrosion Sub-category 1A; H314 Serious eye damage Category 1; H318 Specific target organ toxicity - single exposure Category 3; H335 Long-term (chronic) aquatic hazard Category 3; H412 Oxidizing liquids Category 1 H271 >= 70 % Oxidizing liquids Category 2 H272 50 - < 70 % Skin corrosion Category 1A H314 >= 70 % Skin corrosion Category 1B H314 50 - < 70 % Skin irritation Category 2 H315 35 - < 50 % Serious eye damage Category 1 H318 8 - < 50 % Eye irritation Category 2 H319 5 - < 8 % Specific target organ toxicity - single exposure Category 3 H335 >= 35 %	>= 10 - < 20
Peracetic acid	79-21-0 201-186-8 01-2119531330-56	Flammable liquids Category 3; H226 Organic peroxides Type D; H242 Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin corrosion Category 1A; H314 Short-term (acute) aquatic hazard Category 1; H400 Specific target organ toxicity - single exposure Category 3; H335 Long-term (chronic) aquatic hazard Category 1; H410 Specific target organ toxicity - single exposure Category 3 H335 >= 1 % M = 1 M(Chronic) = 10	>= 10 - < 20

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	:	Remove to fresh air. Treat symptomatically. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Water Carbon dioxide (CO_2)
Unsuitable extinguishing media	:	Foam Dry chemical

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Fire Hazard Keep away from heat and sources of ignition. Flash back possible over considerable distance. Special protective equipment for firefighters Oxidizer. Contact with other material may cause fire. On decomposition, releases oxygen which may intensify fire. Oxidizer; material is an oxidizer which may readily react with other materials, especially upon heating. In case of a fire, if it is possible without risk, remove all containers exposed to the fire and store them in a safe place, away from any source of heat. Cool closed containers exposed to fire with water spray.
Hazardous combustion products	:	Depending on combustion properties, decomposition products may include following materials: Carbon oxides

5.3 Advice for firefighters

Special protective equipment	:	In case of fire, wear a full face positive-pressure self contained

for firefighters		breathing apparatus and protective suit.
Further information	:	Use water spray to cool unopened containers. 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. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Move all flammable sources out of danger and keep them away from the scene. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water. DO NOT hermetically seal any defective containers, including drums (risk of bursting due to the decomposition of the product)

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Isolate the waste do not allow it to come into contact with incompatible materials. For small spills contain with sand or vermiculite and dilute the contained product at least 10 times with water. Transfer to an open topped container and remove to a safe place for neutralization* / disposal. For large spills contain spill and evacuate the area, leave until the reaction subsides, then collect up for disposal. Obtain consent from the local water company / authority if considering discharge to sewer. *NEUTRALIZATION : once diluted, neutralize with a suitable alkali such as sodium bicarbonate. Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Wash hands thoroughly after handling. Do not breathe spray, vapour. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep away from heat and sources of ignition. Protect from frost, heat and sunlight. Store at room temperature in the original container. Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from strong bases. Keep away from combustible material. Absorb spillage to prevent material damage. Keep out of reach of children. Keep container tightly closed. Keep only in original packaging. Store in suitable labeled containers. Pressure bursts may occur due to gas evolution if the container is not adequately vented. May be stored with other similar strong oxidizing agents, provided they are compatible. Do not hermetically seal the container. Always transport and store the containers upright. Risk of overpressure and bursting in the event of decomposition in closed containers and in pipes.

Storage temperature : -20 °C to 30 °C

Packaging material : Suitable material: Plastic material

Unsuitable material: Mild steel, Aluminium

7.3 Specific end use(s)

Specific use(s) : Preservation and sanitation agent. Process water

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Acetic acid	64-19-7	TWA	10 ppm 25 mg/m3	2017/164/EU
Further information	Indicative			
		STEL	20 ppm 50 mg/m3	2017/164/EU
Further information	Indicative			
		TWA	10 ppm 25 mg/m3	FOR-2011-12-06-1358

Further information	A	Substances considered to evoke allergies when coming into touch with the eyes or airways or evoking allergies after coming into contact with the skin		
		STEL	20 ppm 50 mg/m3	FOR-2011-12-06-1358
Further information	A	Substances considered to evoke allergies when coming into touch with the eyes or airways or evoking allergies after coming into contact with the skin		
Hydrogen peroxide	7722-84-1	TWA	1 ppm 1.4 mg/m3	FOR-2011-12-06-1358

DNEL

Acetic acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 25 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 25 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 25 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 25 mg/m3
Hydrogen peroxide	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 1.4 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - systemic Value: 3 mg/m3
Peracetic acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 0.56 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 0.56 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.56 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects

		Value: 0.56 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 0.28 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 0.28 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.28 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 0.28 mg/m3 End Use: Consumers Exposure routes: Oral Potential health effects: Long-term systemic effects Value: 1.25 mg/m3 End Use: Consumers Exposure routes: Oral Potential health effects: Acute systemic effects Value: 1.25 mg/m3
HEDP	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 12 mg/m3 End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 34 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 2.95 mg/m3 End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 17 mg/m3 End Use: Consumers Exposure routes: Oral Potential health effects: Long-term systemic effects Value: 1.7 mg/m3 End Use: Consumers

		Exposure routes: Oral Potential health effects: Long-term systemic effects Value: 1.7 mg/m3

PNEC

Peracetic acid	:	Fresh water Value: 0.000224 mg/l Fresh water sediment Value: 0.00018 mg/kg Water Value: 0.051 mg/l Soil Value: 0.32 mg/kg

8.2 Exposure controls

Appropriate engineering controls

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : In case of skin contact it is recommended to wear gloves to avoid oxidation effect (e.g. skin whitening)
Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes

Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified

respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type:A-P

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	pungent
pH	:	0.5 - 1.5, 100 %
Particle characteristics		
Assessment	:	not applicable
Particle size	:	not applicable
Particle Size Distribution	:	not applicable
Dustiness	:	not applicable
Specific surface area	:	not applicable
Surface charge/Zeta potential	:	not applicable
Shape	:	not applicable
Crystallinity	:	not applicable
Surface treatment /Coatings	:	not applicable
Flash point	:	72 °C
Odour Threshold	:	Not applicable and/or not determined for the mixture
Melting point/freezing point	:	Not applicable and/or not determined for the mixture
Boiling point, initial boiling point and boiling range	:	> 100 °C
Evaporation rate	:	Not applicable and/or not determined for the mixture
Flammability	:	Not applicable and/or not determined for the mixture
Upper explosion limit	:	Not applicable and/or not determined for the mixture
Lower explosion limit	:	Not applicable and/or not determined for the mixture
Vapour pressure	:	Not applicable and/or not determined for the mixture
Relative vapour density	:	Not applicable and/or not determined for the mixture
Density and / or relative density	:	1.13 - 1.15
Water solubility	:	soluble
Solubility in other solvents	:	Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water (log value)	:	Not applicable and/or not determined for the mixture
Auto-ignition temperature	:	Not applicable and/or not determined for the mixture

Thermal decomposition	:	Not applicable and/or not determined for the mixture
Viscosity, kinematic	:	Not applicable and/or not determined for the mixture
Explosive properties	:	Not applicable and/or not determined for the mixture
Oxidizing properties	:	Yes

9.2 Other information

Not applicable and/or not determined for the mixture

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes on heating. Potential for exothermic hazard.

10.2 Chemical stability

Decomposes on heating.
Contamination may result in dangerous pressure increases - closed containers may rupture.

10.3 Possibility of hazardous reactions

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

Heat, flames and sparks.
Direct sources of heat.
Exposure to sunlight.

10.5 Incompatible materials

Mild steel
Aluminium
Metals
Reducing agents
Flammable materials

10.6 Hazardous decomposition products

In the event of fire, see Section 5

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Product

Acute oral toxicity	:	Acute toxicity estimate : 1,531 mg/kg
Acute inhalation toxicity	:	4 h Acute toxicity estimate : 4.66 mg/l Test atmosphere: dust/mist

Acute dermal toxicity	:	Acute toxicity estimate : > 2,000 mg/kg
Skin corrosion/irritation	:	There is no data available for this product.
Serious eye damage/eye irritation	:	There is no data available for this product.
Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	There is no data available for this product.

Components

Acute oral toxicity	:	Acetic acid LD50 rat: 3,310 mg/kg
		Hydrogen peroxide LD50 rat: 486 mg/kg

Components

Acute inhalation toxicity	:	Peracetic acid 4 h LC50 rat: 1.5 mg/l Test atmosphere: dust/mist

Components

Acute dermal toxicity	:	Acetic acid LD50 rabbit: 1,060 mg/kg

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Harmful if swallowed. Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain

Inhalation : Respiratory irritation, Cough

11.2 Information on other hazards

Endocrine disrupting properties : 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.

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Environmental Effects : Very toxic to aquatic life with long lasting effects.

Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Acetic acid
96 h LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l

Hydrogen peroxide
96 h LC50 Pimephales promelas (fathead minnow): 16.4 mg/l

Peracetic acid
96 h LC50: 0.8 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Acetic acid
48 h EC50 Daphnia magna (Water flea): 39.6 mg/l

Peracetic acid
48 h EC50: 0.73 mg/l

Components

Toxicity to algae : Acetic acid
72 h EC50 Skeletonema costatum (marine diatom): > 1,000 mg/l

Hydrogen peroxide
72 h EC50 Skeletonema costatum (marine diatom): 1.38 mg/l

Peracetic acid
72 h EC50: 0.7 mg/l

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability	:	Acetic acid Result: Readily biodegradable. Hydrogen peroxide Result: Not applicable - inorganic Peracetic acid Result: Readily biodegradable.

12.3 Bioaccumulative potential

no data available

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 Endocrine disrupting properties

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.

12.7 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.
Guidance for Waste Code selection	:	Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It

is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number or ID number	:	3098
14.2 UN proper shipping name	:	OXIDIZING LIQUID, CORROSIVE, N.O.S. (Hydrogen peroxide, Peroxyacetic acid, acetic acid)
14.3 Transport hazard class(es)	:	5.1 (8)
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	None

Air transport (IATA)

14.1 UN number or ID number	:	3098
14.2 UN proper shipping name	:	Oxidizing liquid, corrosive, n.o.s. (Hydrogen peroxide, Peroxyacetic acid, acetic acid)
14.3 Transport hazard class(es)	:	5.1 (8)
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	None

Sea transport (IMDG/IMO)

14.1 UN number or ID number	:	3098
14.2 UN proper shipping name	:	OXIDIZING LIQUID, CORROSIVE, N.O.S. (Hydrogen peroxide, Peroxyacetic acid, acetic acid)
14.3 Transport hazard class(es)	:	5.1 (8)
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	None
14.7 Maritime transport in bulk according to IMO instruments	:	Not applicable

Section: 15. REGULATORY INFORMATION

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

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated (containing reportable or/and restricted substances) by Regulation (EU) 2019/1148 (explosives precursors): all suspicious transactions, significant disappearances and thefts should be reported to the relevant national contact point.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	ENVIRONMENTAL HAZARDS E1 Lower tier : 100 t Upper tier : 200 t OXIDIZING LIQUIDS AND SOLIDS P8 Lower tier : 50 t Upper tier : 200 t
Candidate List of Substances of Very High Concern for Authorisation	:	Not applicable

National Regulations

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

Registration number : 669571

Other regulations : Health and Safety at Work Act.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Oxidizing liquids 3, H272	Based on product data or assessment
Corrosive to metals 1, H290	Based on product data or assessment
Acute toxicity 4, H302	Calculation method
Acute toxicity 4, H332	Calculation method
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Specific target organ toxicity - single exposure 3, H335	Calculation method
Long-term (chronic) aquatic hazard 1, H410	Calculation method

Full text of H-Statements

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidizer.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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

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 associated with x% growth rate response; 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; 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 - 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; 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Prepared by : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 a 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.

Annex: Exposure Scenarios

Exposure Scenario: Preservation and sanitation agent. Process water

Life Cycle Stage	:	Use at industrial sites	
Product category	:	**PC35**	Washing and cleaning products (including solvent based products)

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	50 kg	
Type of Sewage Treatment Plant	:	Municipal sewage treatment plant	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8b**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC4**	Use in batch and other process (synthesis) where opportunity for exposure arises
Exposure duration	:	480 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	