TENNANTS DISTRIBUTION LIMITED
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PRODUCT: HYDROGEN PEROXIDE PERSYNT® 350 COS

PRODUCT SPECIFICATION

Product Name	Hydrogen Peroxide Persynt® 350 COS
Specification Reference	HYPEPE350/1 (18/01/0038582)

SALES SPECIFICATION

Characteristic	Unit	Lower Limit	Upper Limit
H_2O_2 content ($KMnO_4$)	g/100g	35.0	35.4
Decomposition rate (16h/96ºC) ($KMnO_4$)	%	-	5.0
pH value			4.0
Density	g/ml	1.130	1.190

NOTES

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Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Chemical Name (EINECS)	Hydrogen Peroxide
Trade Names	Persynt® 350 COS
CAS Number	7722-84-1
EINECS Number	231-765-0
REACH Registration Number	01-2119485845-22-XXXX

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

Identified use(s)	For industrial use
	For oxidation
	For detailed exposure scenarios see Annexes

1.3 Details of the supplier of the safety data sheet

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation 1272/2008 (CLP)

Corrosive to metals	Category 1	H290
Acute toxicity (oral)	Category 4	H302
Acute toxicity (inhalation)	Category 4	H332
Skin corrosion/irritation	Category 2	H315
Serious eye damage/eye irritation	Category 1	H318
Specific Target Organ Toxicity - Single exposure	Category 3	H335

2.2 Label elements

2.2.1According to Regulation (EC) No. 1272/2008 (CLP).

Hazard-defining component(s) (GHS)

Hydrogen Peroxide solution

Hazard Pictograms

Signal word(s) Danger.

Hazard statement(s)

H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.

Precautionary statement(s)

Prevention

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements

Reaction

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of water/ soap.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental hazard / labelling elements (EU):

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 1.25 %

2.3 Other hazards

Product is a strong oxidizing agent.
Danger of decomposition under influence of heat.
Risk of decomposition in contact with incompatible substances, impurities, metals, alkalis, reducing agents.
Risk of explosion with organic solvents - See also section 10.
Not a PBT, vP vB substance as per the criteria of the REACH Regulation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Nature
Aqueous solution, clear
Information on ingredients/hazardous components as per EU CLP Regulation (EC) No.1272/2008

Hydrogen Peroxide ≤35%		**Classification**
CAS No.	7722-84-1	Oxidising liquids Category 1 H271
EC No.	231-765-0	Acute toxicity (Oral) Category 4 H302
REACH Registration Number	01-2119485845-22-xxxx	Skin corrosion/irritation Category 1A H314
		Acute toxicity (inhalation) Category 4 H332
		Specific target organ toxicity - single exposure Category 3 H335

Remarks: From Annex VI, Directive (EC) No. 1272/2008 supplemental classification with:
Chronic aquatic toxicity Category 3 H412
Remarks: Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

Etidronic-acid .75% - 1.25%		**Classification**
CAS No.	2809-21-4	Corrosive to metals Category 1 H290
EC No.	220-552-8	Acute toxicity (Oral) Category 4 H302
		Serious eye damage Category 1 H318

See Section 16 for full text of H-Statements

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Pay attention to self-protection.
Remove victims from hazardous area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered. Do not leave victims unattended. If the casualty is unconscious: Place the victim in the recovery position.

Inhalation

Potential for exposure by inhalation if aerosols or mists are generated. Move victims into fresh air. With laboured breathing: Provide with oxygen. Consult a doctor. If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.

Skin contact

Wash off affected area immediately with plenty of water for at least 15 minutes. If symptoms persist, consult a physician for treatment.

Eye contact

With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. Consult an ophthalmologist immediately if the symptoms persist. When dealing with caustic substances, notify emergency physician immediately (key words: burns in eye).

Ingestion

Rinse mouth. Immediately give large quantities of water to drink. Obtain medical attention. When dealing with caustic substances, notify emergency physician immediately.

4.2 Most import symptoms and effects, both acute and delayed

Symptoms

Irritation of skin and mucous membranes Causes burns. Dizziness. Headache, vertigo, somnolence (sleepiness), nausea. Health injuries may be delayed.

Hazards

Strongly irritating to corrosive. Harmful in contact with skin and if swallowed. Vapours may cause drowsiness and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

The initial focus is only on the local action, characterized by quickly progressing deep tissue damage.
In the eye, caustic/ irritating and harmful liquids cause, depending on the intensity of exposure, various levels of irritation, destruction, and ablation of the epithelium of the conjunctiva and cornea, corneal clouding, oedema and ulcerations.
Danger! Possible loss of eyesight!
Superficial irritations and damage up to ulcerations and scarring develop on the skin. After accidental absorption in the body, the pathology and clinical findings are dependent on the kinetics of the substance (quantity of absorbed substance, the absorption time, and the effectiveness of early elimination measures (first aid)/ excretion - metabolism). A specific action of the substance is unknown. In case of substances with high water solubility, irritations up to formation of necrosis in the upper respiratory tract may result after inhalation of caustic/ irritating aerosols and mists.
The initial focus is on the local action: signs of irritation of the respiratory tract such as coughing, burning behind the sternum, tears, burning in the eyes or nose. There is a risk of pulmonary oedema!

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Water spray. Adapt fire-extinguishing measures to surroundings. Foam. Dry powder. Carbon dioxide (CO_2)
Unsuitable extinguishing media: Organic compounds

5.2 Special hazards arising from the substance or mixture

Product is fire-stimulating.
Contact with the following substances may cause inflammation: flammable substances. The product itself does not burn. Involved in fire, it may decompose yielding oxygen.
Risk of overpressure and burst due to decomposition in confined spaces and pipes. Release of oxygen may support combustion.

5.3 Advice for fire-fighters

Evacuate personnel to safe areas.
Keep out unprotected persons. Keep unauthorized persons away. With large-scale fire, violent decomposition or even explosion is possible.
In the case of fire, cool the containers that are at risk with water or dilute with water (flooding). Or In case of fire, remove the endangered containers and bring to a safe place, if this can be done safely. Ensure there are sufficient retaining facilities for water used to extinguish fire.
Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities. Fire residues should be disposed of in accordance with the regulations.
Water used to extinguish fire should not enter drainage systems, soil or stretches of water. In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Product causes chemical burns. Evacuate personnel to safe areas. Keep out unprotected persons. Keep unauthorised persons away.

6.2 Environmental precautions

Observe regulations on prevention of water pollution (check, dam up, cover up). Dam with sand or earth. Do not use: textiles, saw dust, combustible substances. Do not permit to enter into surface water, stretches of water, soil undiluted.

6.3 Methods and material for containment and cleaning up.

In case of larger quantities:
Collect product in suitable containers (e. g. made of plastic) using appropriate equipment (e. g. liquid pump). Keep away from flammable substances. Keep away from incompatible substances. Rinse away any residue with plenty of water. Dispose of absorbed material in accordance with the regulations. With small amounts: Dilute product with lots of water and rinse away.
or
Absorb with liquid-binding material, e. g.: diatomaceous earth or universal binder. Pick up mechanically. Collect in suitable containers. Clean contaminated surface thoroughly. Pack and label wastes like the pure substance. Do not detach label from the delivery containers prior to disposal.

Additional advice

Make safe or remove all sources of ignition. Shut off leak, if possible and safe to do. Isolate defective containers immediately, if possible and safe to do. Place defective containers in waste receptacle (waste packaging receptacle) made of plastic (not metal). Do not seal defective containers or waste receptacles airtight (danger of bursting due to product decomposition).Never return spilled product into its original container for re-use. (Risk of decomposition).

6.4 Reference to other sections

Wear personal protective equipment; see section 8.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid impurities and heat effect. Ensure there is good room ventilation. Avoid contact with skin, eyes and clothing. Do not inhale vapour, aerosols, mist. Wear personal protective equipment. Immediately change moistened and saturated work clothes. Immediately rinse contaminated or saturated clothing with water. Provide for installation of emergency shower and eye bath. Set up safety and operation procedures.
Never return spilled product into its original container for re -use. (Risk of decomposition.).

7.2 Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Avoid sun rays, heat, and heat effect. Keep away from sources of ignition - No smoking. Keep away from flammable substances. Keep away from incompatible substances.

Storage

Storage Temperature requirement during storage max. 40°C. Clean, dry. Well ventilated. Jointless smooth concrete floor. Recommendation: Acid-proof floor. Only use containers which are specially permitted for: hydrogen peroxide and/or
For transport, storage and tank installations only use suitable materials. Use adequate venting devices on all packages, containers and tanks and check correct operation periodically. Do not confine product in unvented vessels or between closed valves. Risk of overpressure and burst due to decomposition in confined spaces and pipes. Packages, containers and tanks should regularly be checked by visual observation for any sign of abnormality, e.g. corrosion, exert pressure (bulging), temperature increase etc. Transport and store container in upright position only. Always close container tightly after removal of product. Do not keep the container sealed. Ensure tightness at all times. Avoid leakage. Avoid residues of the product on the containers.

Suitable materials	stainless steel: 1.4571 or 1.4541, passivated
Suitable materials	aluminium: min. 99.5 % passivated
Suitable materials	aluminium magnesium alloys, passivated
Suitable materials	polyethylene, polypropylene, poly vinyl chloride (PVC),
Suitable materials	polytetrafluoroethylene
Suitable materials	glass, ceramics.
Unsuitable materials	iron, mild steel, copper, bronze, brass, zinc, tin

Further information

Measures for storing in tank installations. These should include at least:
Compatible materials, adequate separation, adequate venting area, venting devices, temperature measurement, earthing (grounding), bund in case of leakage. Prior to the first filling and operation of a tank installation all parts of the facility including all pipes must be thoroughly cleaned and flushed through. Metal elements of the installation must first be pickled and passivated sufficiently. For detailed information on design specifications for the construction of tank - and dosing installations ask the producer for advice. Regularly verify the availability of water to deal with emergencies (for cooling, tank flooding, fire fighting) and check correct operation periodically.

Advice on common storage

Do not store together with: alkalis, reductants, metallic salts (risk of decomposition). Do not store together with: inflammable substances (risk of fire). Do not store together with: organic solvents (risk of explosion).

7.3 Specific end use(s)

For more details see annexes exposure scenario.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters - Hydrogen Peroxide

CAS Number	EC Number	Control Parameters	Update Basis
7722-84-1	231-765-0	1 ppm 1.4 mg/m^3	Time ~Weighted Average (TWA): (EH40 WEL)
7722-84-1	231-765-0	2 ppm 2.8 mg/m^3	Short Term Exposure Limit (STEL): (EH40 WEL)

DNEL/DMEL values

End Use	Worker
Routes of exposure	Inhalation
Possible health damage	Acute- local effects
Value	3mg/m^3
End Use	Worker
Routes of exposure	Inhalation
Possible health damage	Long term-local effects
Value	1.4mg/m^3
End Use	Consumers
Routes of exposure	Inhalation
Possible health damage	Acute- local effects

Value	1.93mg/m^3
End Use	Consumers
Routes of exposure	Inhalation
Possible health damage	Long term- local effects
Value	0.21mg/m^3

PNEC values

Freshwater

Value	0.0126mg/l

Marine water

Value	0.0126mg/l

Water-intermittent release

Value	0.0138mg/l

Sewage treatment plant

Value	4.66 mg/l

Fresh water sediment

Value	0.47 mg/kg (dry weight)

Marine water sediment

Value	0.47 mg/kg (dry weight)

Soil

Value	0.0023 mg/kg (dry weight)

8.2 Exposure controls

Appropriate engineering controls

Ensure suitable suction/aeration at the work place and with operational machinery. Provide for installation of emergency shower and eye bath.

Suitable measuring processes are:
OSHA method ID 006
OSHA method VI-6

Respiratory protection

If workplace exposure limit is exceeded apply respiratory protective equipment.
If open handling is unavoidable:
Wear respiratory protection. If necessary: Provide with fresh air. If necessary: Local ventilation.
When handling for a short time:
Suitable filter: Type NO-P3, code colour blue-white
In the event of prolonged exposure during handling:
Self-contained breathing apparatus (EN 133)
Note time limit for wearing respiratory protective equipment.

Hand protection

Wear suitable gloves

Gloves material

butyl-rubber, for example: Butoject 898, Kachele-Carna Latex GmbH (KCL), Germany
Material thickness: 0.7 mm. Breakthrough time: >480 min. Method: DIN EN 374. Glove material: Natural rubber (NR) for example: Combi latex 395, Kachele-Cama Latex GmbH (KCL), Germany
Material thickness: 1 mm. Breakthrough time: >480 min. Method: DIN EN 374. Glove material: Nitrile, for example: Camartril 731, Kachele-Cama Latex GmbH (KCL), Germany
Material thickness: 0.33 mm. Breakthrough time: >480 min. Method DIN EN 374

Eye protection

Safety glasses with side shields conforming to EN 166. Or when handling larger quantities: basket shaped glasses

Skin protection

Wear protective clothing, acid-proof.
Suitable materials are: PVC, neoprene, nitrile rubber (NBR), rubber. Rubber or plastic boots

Hygiene Measures

Do not inhale vapour, aerosols, mist. Avoid contact with skin, eyes and clothing. Ensure there is good room ventilation.
The work-place related airborne concentrations have to be kept below of the indicated exposure limits. If the limits at the workplace are exceeded and/or larger amounts are released (leakage, spilling, etc.) the indicated respiratory protection should be used.
No eating, drinking, smoking, or snuffing tobacco at work. Wash face and/or hands before break and end of work. Preventive skin protection Avoid contaminating clothes with product. Immediately change moistened and saturated work clothes. Immediately rinse contaminated or saturated clothing with water. Any contaminated protective equipment is to be cleaned after use.

Protective Measures
Handle in accordance with good industrial hygiene and safety practice. Wear suitable protective clothing, gloves and eye/face protection. Avoid protective gloves, clothes and shoes made from the following materials: Leather
The personal protective equipment used must meet the requirements of directive 89/686/EEC and amendments (CE certification). It should be defined in the work place in the form of a risk analysis according to directive 89/686/EEC and amendments.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties (Hydrogen Peroxide 50%)	
Appearance	Liquid
Colour	Colourless, clear
Odour	Slightly pungent
Odour threshold	No data available
pH	<1
Melting point/range	-33ºC
Boiling point/ range	ca.108ºC
Flash point	Does not flash
Evaporation rate	No data available
Flammability (solid, gas)t	Non flammable
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapour pressure	2.99hPa (25ºC) Tested substance: Hydrogen peroxide 100%
Vapour density	No data available
Density	1.140 g/cm^3 (20ºC)
Water solubility	Miscible
Miscibility in water	Completely miscible
Partition co-efficient (n-octanol/water)	Log Pow: Method: Calculated -1.57 Tested substance: Hydrogen peroxide100%
Auto inflammability	Not spontaneously flammable
Thermal decomposition	No data available
Viscosity, dynamic	1.11 mPas (20ºC)
Explosiveness	Not explosive
Oxidising properties	No data available
9.2 Further information	
Molecular weight	34.02 g/Mol
Surface tension	Ca.74.67 mN/m (20ºC)
Other information	Oxidising agent

10. STABILITY AND REACTIVITY

10.1 Reactivity
No further information available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Product is a strong oxidizing agent and reactive. Commercial products are stabilised to reduce risk of decomposition due to contamination. Danger of decomposition if exposed to heat
When coming in contact with the product, impurities, decomposition catalysts, incompatible substances, combustible substances, may lead to self-accelerated, exothermic decomposition and the formation of oxygen.
Risk of overpressure and burst due to decomposition in confined spaces and pipes. Release of oxygen may support combustion.
Mixtures with organic materials (e.g. solvents) can display explosive properties.

10.4 Conditions to avoid
Sun rays, heat, heat effect

10.5 Incompatible materials
Impurities, decomposition catalysts, metals, metallic salts, alkalis, hydrochloric acid, reducing agents, (risk of decomposition)
Flammable substances (danger of fire)
Organic solvents (danger of explosion)

10.6 Hazardous decomposition products

Decomposition products under conditions of thermal decomposition: steam, oxygen.
No further information available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity:
LD50 Rat (male): 1193 mg/kg. Method: EPA Method Test substance: Hydrogen peroxide 35 %
LD50 Rat (female): 1270 mg/kg. Method: EPA Method. Test substance: Hydrogen peroxide 35 %

Acute Inhalation Toxicity:
LC50 Rat (male/female) >0.17 mg/l/4h. Method: US-EPA-method. Test Substance: Hydrogen peroxide 50%
The maximum dose attainable under experimental conditions no fatalities.

Acute Dermal Toxicity
LD50 Rabbit (male/female): > 2000 mg/kg. Method: US-EPA-method. Test substance: Hydrogen peroxide 35 %

Skin Corrosion/Irritation
Rabbit / 4h irritating. Test Substance: Hydrogen peroxide 35%

Eye irritation
Rabbit. Irritating. Method: OECD Guide-line 405. Test Substance: Hydrogen Peroxide 10%, literature

Sensitisation
Sensitisation test guinea pig: not sensitising. Method: (Magnusson-Kligman test). Literature

Repeated Dose Toxicity
Oral Mouse (female). / 90d, Subsequent observation period: 6 weeks. NOEL: 37 mg/kg.
Target organ/effect: changes of parameters of blood, body weight development negative, irritative effect: Gastrointestinal tract. Method: OECD TG 408. Test substance : hydrogen peroxide 35%, Drinking water analysis
Oral Mouse (male). : 90d, Subsequent observation period: 6 weeks. NOEL: 26 mg/kg.
Target organ/effect: changes of parameters of blood, body weight development negative. Irritative effect: Gastrointestinal tract. Method: OECD TG 408. Test substance : hydrogen peroxide 35%Drinking water analysis

Assessment of STOT single exposure: No data available
Assessment of STOT repeated exposure: No data available
Risk of Aspiration Toxicity: No data available

Genotoxicity in vitro
Bacterial reverse mutation assay S-typhimurium /E.coli positive and negative
Metabolic activation; with or without -literature
Chromosomal aberration mammalian cells positive. Metabolic activation: without. Method: OECD TG 473 literature
Genetic mutation in mammal cells- positive. Metabolic activation: without, Method: OECD TG 476, literature

Genotoxicity in vivo
Micronucleus test mouse intraperitoneal (i.p) negative. Method: OECD TG 474. Test substance: Hydrogen Peroxide 35%

Carcinogenicity
No data available
Carcinogenicity assessment: Clues to possible carcinogenic effects in animal experiments:
Up to date there is no evidence of increase tumour risk
Hydrogen peroxide is not a carcinogenic substance according to MAK, IARC, NTP, OSHA, ACGIH

Toxicity to reproduction
No data available

Human experience
Effect on the skin: Causes caustic burns. With increasing contact length, local erythema or extreme irritation (whitening) up to blistering (caustic burn) can occur
Effect on the eyes: Extreme irritation up to cauterisation. Can cause severe conjunctivitis, cornea damage or irreversible eye damage. Symptoms may occur with delay
Effect when swallowed: Swallowing can lead to bleeding of the mucosa of the mouth, oesophagus and stomach. The rapid release of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the internal organs, especially in the event of greater intake of the product
Effect when inhaled: Inhalation of vapours/aerosols can lead to irritation of the respiratory tract and cause inflammation of the respiratory tract and pulmonary oedema. Symptoms may occur with delay

Toxicology Assessment
Acute effects
Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Harmful if inhaled. May cause respiratory irritation.
Sensitisation
Due to the data available, the classification criteria for all further toxicological end points are not fulfilled

Repeated dose toxicity
Due to the data available, the classification criteria for all further toxicological end points are not fulfilled

CMR Assessment
Mutagenicity: The classification criteria are not met based on the available data.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicology Assessment
Acute aquatic toxicity
The classification criteria are not met based on the available data.
Chronic aquatic toxicity
The classification criteria are not met based on the available data.
Toxicity to fish
LC50 semi-static test Pimephales promelas: 16.4 mg/l / 96 h. Test substance: Hydrogen peroxide 100 %
Toxicity in aquatic invertebrates
EC50 semi-static test Daphnia pulex: 2.4 mg/l / 48 h. Test substance: Hydrogen peroxide 100 %
Toxicity to algae
NOEC static test Skeletonema costatum: 0.63 mg/l/72 h. End point: Growth rate. Test substance: Hydrogen peroxide 100 %
Toxicity to bacteria
EC50 static test Activated sludge: 466 mg/l/30 min. Test substance: Hydrogen peroxide 100 %. Method: OECD TG 209
EC50 static test Activated sludge: > 1000 mg/l / 3 h. Test substance: Hydrogen peroxide 100 %. Method: OECD TG 209
Chronic toxicity in daphnia
NOEC flow-through test Daphnia magna: 0.63 mg/l/21 d. Test substance: Hydrogen peroxide 100 % literature

12.2 Persistence and degradability
Photo-decomposition: 50% degradation with approx.20 hours; medium: air
Biodegradability: Result: Readily biodegradable. Semiquantitive measurement of concentration over time. Related to substance: Hydrogen Peroxide 100%
AOX: The product does not contain any organically bonded halogen.
Further information: Under ambient conditions quick hydrolysis, reduction or decomposition occurs. The following substances are formed: oxygen and water

12.3 Bio accumulative potential
Bioaccumulation: none. Hydrogen peroxide quickly decomposes to oxygen and water

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not a PBT, vPvB substance as per the criteria of the REACH Ordinance

12.6 Other adverse effects
No further information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product:
Disposal in accordance to local authority regulations. If necessary: Because of recycling/disposal contact the relevant authorities. Offer surplus and non-recyclable solutions to a licensed disposal company
With small amounts:
May be disposed of as sewage water in accordance with local regulations by previously diluting with plenty of water. (Drainage systems, sewage treatment plant)
Uncleaned Packaging:
Rinse empty containers before disposal; recommended cleaning agent; water
Offer rinsed packaging material to local recycling facilities. Do not use empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. Dispose of containers that have not been emptied completely and/or cleaned like the substance
Waste Key Number
No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm/official authority

14. TRANSPORT INFORMATION

Land Transport ADR/RID/GGVSEB (Germany)

Transport hazard class(es)	5.1 (8)
UN No.	2014
Packaging group	II
Tunnel Restriction Code (ADR)	(E)
Special precautions for user	Yes
UN Proper Shipping Name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Sea Transport IMDG-Code/GGVSee (Germany)	
	
Transport hazard class(es)	5.1 (8)
UN No.	2014
Packaging group	II
EmS	F-H, S-Q
	Protect from heat. On deck only. Product-specific regulations on storing substances separately
	'Separated from' permanganates and class 4.1
Proper technical name (proper shipping name)	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Air Transport ICAO-TI/IATA-DGR	
	
Transport hazard class(es)	5.1 (8)
UN No.	2014
Packing group	II
Special precautions for user	Yes
	IATA-C: ERG-Code 5C
	IATA-P: ERG-Code 5C
Proper technical name (proper shipping name)	Hydrogen peroxide, aqueous solution
Inland waterway transport ADN/ADNR/GGVSEB (Germany)	
	
Transport hazard class(es)	5.1 (8)
UN No. Substance number	2014
Packaging group	II
Special precautions for user	No
Description of the goods (technical name)	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: For transport approval see regulatory information	

15. REGULATORY INFORMATION

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

Labelling according to EC Directives

National legislation

Control of Explosive Precursors and Poisons Regulations 2023: This product is classified as a regulated explosive precursor.
Water contaminating class (Germany): WGK 1 - slightly water endangering. Classification according to VwVwS, supplement 4

Regulation on labour safety

It must be determined whether preventive substance-specific occupational medical examinations in accordance with national law in each case must be offered/carried out at regular intervals.

Employment restriction

Please note Directive 92/85/EEC (Pregnant Workers Directive) and amendments. Please note Directive 94/33/EC (Protection of Young Workers at the Workplace Directive) and amendments.

Other regulations

Please observe Appendix XVII of the EU Regulation 1907/ 2006 (Restrictions on the manufacture, placing on the market, and use of certain dangerous substances, preparations and articles) as well as their amendments.
The information and record-keeping obligations and the prohibition of self-service must be observed (Art. 3 and 4 of ChemVerbotsV) [German Regulation on Prohibited Chemicals].

Please observe EU Regulation 98/2013 EEC (Marketing and Use of Explosives Precursors) as well as its amendments and implementation guidelines.

Registration

Europe (EINECS/ELINCS) – Listed/registered
USA(TSCA) – Listed/registered
Canada (DSL) – Listed/registered
Australia (AICS) – Listed/registered
Japan (MITI) – Listed/registered
Korea (TCCL) – Listed/registered
Philippines (PICCS) – Listed/registered
China – Listed/registered
New Zealand – Listed/registered

15.2 Chemical safety assessment

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H271: May cause fire or explosion; strong oxidiser.
H290: May be corrosive to metals.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H412: Harmful to aquatic life with long lasting effects.

Source of key data used to compile the data sheet

Supplier information

Modifications from last revision

Section 15 of the datasheet has been updated.
Date: 15/09/23