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

1.1 Product identifier

Chemical type	:	Substance
Product name	:	HYDROCYDE
Substance name	:	HYDROGENE PEROXIDE 35% IN AQUEOUS SOLUTION
UE identification No	:	008-003-00-9
EC No (EINECS)	:	231-765-0
CAS No	:	7722-84-1
REACH registration No	:	01-2119485845-22
Product code	:	6007012117 / 6007012118
Molecular formula	:	H2O2

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

Relevant identified uses

Main use category	:	Industrial
Use of the substance/mixture	:	Sterilizing product

Uses advised against

1.3 Details of the supplier of the safety data sheet

Getinge Life Science France, 1, rue du Comté de Donegal, 41102 – VENDOME cedex France
Tel.: +33 [0] 254 734 747 Fax.: +33 [0] 254 734 748 Site : www.getinge.com e-mail : philippe.ledent@getinge.com

AUSTRALIA – Getinge Australia Pty Ltd, Level 7/11 Help Street, Chatswood NSW 2067 Tel: 1800 438 464

NEW ZEALAND – Getinge Australia (NZ Branch), 600 Great South Road, Building B Level 2, Ellerslie Auckland Tel: 0800 1 438 4643

1.4 Emergency telephone number

Country	Official advisory body	Address	Emergency No
FRANCE	Centre Antipoison et de Toxicovigilance de Nancy - Base Nationale Produits et Compositions Hôpital Central	29 avenue du Maréchal de Lattre-de-Tassigny - F-54035 Nancy Cedex	+33 [0] 383 323 636
FRANCE	ORFILA		+33 [0] 145 425 959
AUSTRALIA	Carechem 24		+ 61 2 8014 4558
NEW ZEALAND	Carechem 24		+64 9 929 1483

Other national emergency numbers in each Member State of the European Union are set out in section 16 of this MSDS or available at the following address: *http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks*

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Harmful if swallowed, category 4	:	H302
Causes skin irritation, category 2	:	H315
Causes serious eye damage, category 1	:	H318
Harmful if inhaled, category 4	:	H332
May cause respiratory irritation, category 3	:	H335

For the full text of risk phrases (H) mentioned in this chapter, see section 16.

Classification according to Regulation 67/548/EEC or 1999/45/EC

Harmful	:	**Xn**
Harmful if swallowed	:	R22
Irritating to respiratory system and skin	:	R37/38
Risk of serious damage to eyes	:	R41

For the full text of risk phrases (R) mentioned in this chapter, see section 16.

2.2 Label elements

Classification according to Regulation (EC) No 1272/2008

CLP Label(s) :


GHS05


GHS07

CLP Signal word	:	**Danger**
Hazard statements (H statements)	:	H302 – Harmful if swallowed H315 – Causes skin irritation H318 – Causes serious eye damage H332 – Harmful if inhaled H335 – May cause respiratory irritation
Precautionary statements (P statements)	:	P280 – Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302+P352 – IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

Potential health effects:
See section 4.2.

Environmental Effects:
See section 12.

Physical and chemical hazards:
Risk of decomposition when in contact with incompatible substances Decomposition products: See section 10.

Other
Results of PBT and vPvB assessment : According to REACH regulation, annex XIII, this mixture contains no substance meeting PBT and vPvB criteria.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name	Product identifier type		%	Classification according to Regulation (EC) No 1272/2008	
Hydrogen peroxide solution	CAS No EC No (EINECS) UE identification No REACH registration No	: 7722-84-1 : 231-765-0 : 008-003-00-9 : 01-2119485845-22	~ 35	Ox. Liq. 1 Skin Corr. 1A Acute Tox. 4 (Inhalation) Acute Tox. 4 (Oral) STOT SE 3	: H271 : H314 : H332 : H302 : H335
Water	CAS No	: 7732-18-5	~ 65	N/A	

Name	Product identifier type		%	Classification according to Regulation 67/548/EEC
Hydrogen peroxide solution	CAS No EC No (EINECS) UE identification No REACH registration No	: 7722-84-1 : 231-765-0 : 008-003-00-9 : 01-2119485845-22	~ 35	R5 O ; R8 C ; R35 Xn ; R20/22
Water	CAS No	: 7732-18-5	~ 65	N/A

For the full text of risk phrases (R, H and EUH) mentioned in this chapter, see section 16.

3.2 Mixtures

Not applicable.

SECTION 4: First aid measures

4.1 Description of first aid measures

First aid	:	RESPOND VERY QUICKLY. MEDICAL ALERT. DON NOT GIVE FLUIDS OR INDIUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS.
Following inhalation	:	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if breathing difficulty persists.
Following skin contact	:	Rinse immediately with plenty of water, the skin and contaminated clothing before removing. Seek medical attention if ill effect or irritation develops.
Following eyes contact	:	Rinse cautiously with water for several minutes. If easy to do, remove contact lenses. Continue to rinse. Get medical attention immediately.
Following ingestion	:	DO NOT INDUCE VOMITING. If the person is completely conscious / alert, rinse mouth. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation	:	Irritating to respiratory system. Can cause, initially, an inflammation of the nose, throat and respiratory tract. If exposure continues, dizziness, digestive disorders.

Following skin contact	:	Irritating to skin. Can cause burning and a passenger bleaching of the skin.
Following eyes contact	:	Very irritating to eyes. Risk of serious permanent eye damage if the product is not removed quickly. Burning sensation. Redness, pain. Swelling.
Following ingestion	:	Severe gastrointestinal irritation. If swallowed: Irritations mouth and digestive, abdominal pain, nausea, vomiting, diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use the appropriate means for fighting fires nearby. Water.
Unsuitable extinguishing media	:	No limitation extinguishing agents for that substance.

5.2 Special hazards arising from the substance or mixture

Specific risks	:	Reacts violently with combustibles. Risks of explosion from mixing with organic materials.
Dangerous reactions	:	Oxidant effect by release of oxygen.
General measures	:	The oxygen released during thermal decomposition may support combustion. Promotes the combustible material. Contact with flammables may cause fire or explosion.

5.3 Advice for firefighters

Instructions for firefighting	:	Evacuate the danger area. Admit that properly equipped response teams on site. If possible, stop the leaks.
Protective equipment and precautions for firefighters	:	Protective clothing and breathing apparatus.
Other information	:	Disperse the gas / vapors with water spray. Approach from upwind. Cool containers exposed to fire. Collect separately contaminated extinguishing water, do not allow to enter drains or sewers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment	:	Avoid unnecessary exposure. Avoid contact with skin. Do not breathe gas / fumes / vapor / spray. Wear suitable protective clothing, gloves and protective equipment and eye / face. Breathing apparatus recommended.
Emergency procedures	:	If spillage occurs on the public highway, indicate the danger and prevent the local authorities. Ensure good ventilation of the area. Remove all sources of ignition. Evacuate and restrict access.

For emergency responders

Protective equipment	:	Wear suitable protective clothing, gloves and protective equipment and eye / face. Wear self-contained breathing.
Emergency procedures	:	If spillage occurs on the public highway, indicate the danger and prevent the local authorities. Stop leak. Evacuate danger area. Approaching the upwind. Disperse the gas / vapors with water spray. Discard materials and incompatible products.

6.2 Environmental precautions

Dike and contain the spread. Prevent the release into the environment (sewers, rivers, soils). Immediately notify the authorities in case of major spillage. Pump into an emergency adapted tank.

6.3 Methods and material for containment and cleaning up

Methods for containment	:	Dike for recovery or absorb with suitable material. Remove the leak if possible without risk to personnel.
Methods for cleaning up	:	Dike for recovery or absorb with suitable material. Sand. Soil. Do not add chemicals. Sweep or shovel spilled material and place in an appropriate container and labeled for disposal. Dilute residues and flush.

6.4 Reference to other sections

Refer to Section 8 on exposure controls and personal protection, and Section 13 on the elimination.

SECTION 7: handling and storage

7.1 Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition. Good ventilation of the workplace is essential. Avoid unnecessary exposure. Avoid contact with skin and eyes. Do not breathe gas / fumes / vapor / spray. Not eating, not drinking and not smoking during use. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, and before leaving work. Emergency eye wash fountains and safety showers must be installed in the vicinity of any place where there is risk of exposure. Staff must be warned of the dangers of the product.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures : Warn people about the dangers of the product. Respect protective measures.

Storage : Store in airtight containers. Store in a dry, cool and well ventilated. Avoid: Heat and sunlight.

Incompatible products : Organic compounds.

Incompatible materials : Flammable materials. Reducing agents. Bases.

Packaging materials : Consistent grades of HDPE.

7.3 Specific end use(s)

No specific intended use other than those mentioned in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limit value of hydrogen peroxide in solution (7722-84-1) – following the circular of July 19, 1982		
France	VME (ppm)	1
France	VME (mg/m^3)	1,5

8.2 Exposure controls

Industrial hygiene : Focus the technical and operations over the appropriate use of personal protective equipment.

Personal protective equipment : Gloves. Goggles.

Protective closing – Material selection : Example: nitrile rubber. Butyl rubber. PVC. The compatibility of gloves and clothing with the product should be checked with the supplier.

- Hand protection : Wear suitable gloves resistant to chemicals.
- Eyes protection : Wear eye protection, including goggles and face shield chemical resistant, if risk of eye contact from splashes of liquid or dust.
- Skin protection : When skin contact is possible, protective clothing including gloves, aprons, sleeves, boots, protection of the head and face should be worn. Recommended materials: rubber.
- Respiratory protection : If insufficient ventilation, wear suitable respiratory equipment. Use respiratory protection combined type. NO. P3.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear liquid. Colorless

Molecular weight : 34 g/mol

Color : Colorless

Odor : Slight. Pungent

Odor threshold : No data available

pH : 1-4 (apparent pH)

Melting point : -33 °C

Freezing point	:	No data available
Boiling point	:	108 °C (at 1013 mbars)
Flash point	:	No flammable. °C
Evaporation rate relative to butyl acetate	:	No data available
Flammability (solid, gas)	:	No data available
Explosive limit	:	No data available
Vapor pressure	:	12 mbar (at 30°C)
Relative density of the vapor at 20 ° C	:	No data available
Relative density	:	1,13 (at 25 °C)
Relative density, gas (air=1)	:	1
Solubility	:	Water: Product water-soluble.
Log P n-octanol / water at 20°C	:	-1,1
Auto ignition temperature	:	No flammable. °C
Decomposition properties	:	T>60 ° C: self-accelerating decomposition with oxygen release. T <60 ° C: slow decomposition. °C
Viscosity	:	dynamic : 1,11 mPa.s (à 20°C)

9.2 Other information

No information available.

SECTION 10: Stability and Reactivity

10.1 Reactivity

Reacts with: Bases. Reducing agents (fuels). Decomposes on heating. Hazards of exothermic reactions.

10.2 Chemical stability

Stable under normal conditions of use with slow gas release.

10.3 Possibility of hazardous reactions

Promotes the combustible material. Contact with flammables may cause fire or explosion.
Risk of explosion if heated under confinement. Fire or intense heat may cause the failure of the packaging.

10.4 Conditions to avoid

Heat. Limit exposure to air and light. contamination.

10.5 Incompatible materials

Bases. Reducing agents. Organic compounds. Flammable materials. Acids. Metals. Heavy metal salts. Powdered metal salts.

10.6 Hazardous decomposition products

Oxygen accelerates the combustion of flammable materials.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	:	Harmful if inhaled or swallowed.
Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye damage.
Specific target organ toxicity (single exposure)	:	Irritation to respiratory system.

Hydrogen peroxide in solution (7722-84-1)	
Acute orale (rat) LD50	1270 mg/kg
Acute dermal (rabbit) LD50	> 2000 mg/kg
Acute Inhalation (rat) LD50	2000 mg/m^3

Potential adverse effects on men and symptoms : In vitro tests have shown mutagenic effects. Tests on animals have shown no mutagenic effect. Is not ranked due to inconclusive data.
Carcinogenicity: Oral (e), prolonged exposure, mouse, Target organs: duodenum, carcinogenic effects. Dermal, exposure, mouse, tests on animals showed no carcinogenic effect. Inhalation exposure, mouse, tests on animals showed no carcinogenic effect. Is not ranked due to inconclusive data. The substance is completely organic processed (metabolized). The substance is not classified as CMR.

SECTION 12: Ecological information

12.1 Toxicity

Environmental effects : May be harmful to aquatic life.

Water effects : The product evaporates slowly.

Hydrogen peroxide in solution (7722-84-1)	
LC50-96 hours - Fish	16,4 mg/l (Pimephales promelas)
EC50-48 hours Daphnia magna	2,4 mg/l (Crustaceans : Daphnia pulex)

12.2 Persistence and degradability

Hydrogen peroxide in solution (7722-84-1)	
Persistence and degradability	Readily biodegradable.

12.3 Bioaccumulative potential

Hydrogen peroxide in solution (7722-84-1)	
Log P octanol / water at 20 ° C	- 1,1
Bioaccumulative potential	Does not bioaccumulate.

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

Hydrogen peroxide in solution (7722-84-1)	
Results of PBT assessment	This substance is not considered persistent, bioaccumulative and toxic (PBT).

12.6 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment methods : Waste must be disposed of in accordance with Directive 2008/98/EC on waste and local and national regulations in force. Leave the product in original container. Not mixed with other waste. Treat unclean containers as the product itself.

Recommendations of sewage : Do not flush to sewer.

Recommendations for disposal of packaging : Empty containers will be carefully rinse with large amounts of clean water. After last use, the packaging will be totally empty and closed. Containers should be disposed of according to local and national regulations in effect.

Additional information : The user's attention is drawn to the possible existence of local regulations, disposal, about him. Disposal must be in accordance with applicable local, state or national.

SECTION 14: transport information

14.1 UN number

UN No : 2014

14.2 UN proper shipping name

Regulation	Proper shipping name	Other information
ADR	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	Restriction code tunnels: E
ADN	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	
RID	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	
IATA Cargo	Hydrogen peroxide, aqueous solution	
IATA Passenger	Hydrogen peroxide, aqueous solution	
IMDG	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	EmS number: F-H.S-Q

Description transport document : UN 2014 HYDROGEN PEROXIDE IN AQUEOUS SOLUTION, 5.1 (8), II, (E)

14.3 Transport hazard class(es)

Hazard class : 5.1 - Oxidizers

Danger No (Kemler code) : 58

Classification code : OC1

Transport label(s) : 5.1 – Oxidizing / 8 – Corrosive

14.4 Packing group

Packing group : II

14.5 Environmental hazards

Environmental pollutant : NO

Other information : No information available.

14.6 Special precautions for user

Precautions for transport : Respect the regulations relating to transport (ADR / RID, IATA / ICAO, IMDG).
In case of accident, refer to the written instructions of transport and Chapters 5, 6 and 7 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code"

No information available.

SECTION 15: Regulatory information

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

UE regulation

No information available.

Nationals directives

Regulation of Classified Installations for the Environment (ICPE) for the manufacture, use or storage of oxidizing substances or preparations according to section 1200.
Decree No. 2002-540 of 18/04/02 on classification of waste according to the code 16 09 03 * (Oxidizing Substances: peroxides, eg hydrogen peroxide).

15.2 Chemical Safety Assessment

No information available.

SECTION 16: Other information

Other information: full text mentions R, H and EUH.

Acute Tox. 4 (Inhalation)	Acute Toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute Toxicity (oral) Category 4
Ox. Liq. 1	Oxidizing liquid Category 1
Skin Corr. 1A	Skin corrosion Category 1A
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H271	May cause fire or explosion; strong oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
R20/22	Harmful if swallowed or inhaled.
R22	Harmful if swallowed.
R35	Causes severe burns
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
R5	Danger of explosion under the action of heat.
R8	Promotes the combustible material.

List of national emergency numbers of the Member States of the European Union	
Austria	+431 406 43 43
Belgium	070/245.245
Bulgaria	+359 2 9154 409
Czech Republic	+420 224 919 293 or +420 224 915 402
Denmark	82 12 12 12
Estonia	16662 (abroad +372 626 93 90)
Finland	(09) 471 977
Germany	030/19240 (Berlin)
Hungary	+36 80 20 11 99
Ireland	01 809 2166
Lithuania	+370 5 236 20 52 or +370 687 53378
Malta	2545 6504
Norway	22 59 13 00
Portugal	808 250 143
Romania	021 318 36 06
Slovakia	+421 2 5477 4166
Spain	+ 34 91 562 04 20
Sweden	08 331231

For all member states of the European Union not listed above, 112 (European emergency number) is recommended.

The information contained herein is based on the current state of our knowledge. They describe the security arrangements to be taken with respect to the product. They do not represent a guarantee of product properties.