SAFETY DATA SHEET

Hydrogen Peroxide (29–32 %) — Laboratory Reagent, Analytical Reagent, PV Pure and Ultrapure PPB grades

Prepared in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard, 2024 amendment / GHS Rev. 7), UN GHS, US DOT 49 CFR Parts 171–180 and Canada HPR (SOR/2015-17)

SDS number	**HP-SDS-20500-US-01**
Version / Revision	Version 1.0
Issue date	01 November 2026
Supersedes	Not applicable (first issue)
Review due	01 November 2029, or earlier if new hazard information becomes available
Companion sheet	A GB/EU sheet for supply by Highpuris Ltd will be issued separately. Do not substitute one sheet for the other — the classification is the same but the exposure limits, supply restrictions and legal references are not.

1 SECTION 1: IDENTIFICATION

1.1 Product identifier

Product name	**Hydrogen Peroxide (29–32 %)**
Product description	Aqueous solution of hydrogen peroxide, nominal 30 % w/w, stabilised as necessary. Assay range by grade: 29.0 – 31.0 % w/w (Laboratory Reagent), 29.0 – 32.0 % w/w (Analytical Reagent), 30.0 – 31.0 % w/w (PV Pure) and 30.0 – 32.0 % w/w (Ultrapure PPB). All grades carry the same hazard classification and transport description.
Synonyms	Hydrogen dioxide; Dihydrogen dioxide; Perhydrol (30 %); Peroxyde d'hydrogène
CAS number	7722-84-1
EC (EINECS) number	231-765-0
EU Index number	008-003-00-9
REACH registration number	Not applicable to supply in the United States. A REACH registration (or coverage under a registrant's supply chain) is required before placement in the EU/EEA or Northern Ireland; UK REACH applies to Great Britain.
Molecular formula	H_2O_2 (aq)
Molecular weight	34.01 g/mol (H_2O_2)
Highpuris product code	**20500** — the 9-digit catalogue SKUs below are built as product code · grade · pack
Pack sizes covered	500 mL and 1 L HDPE bottles with vented closures; 25 L and 50 L HDPE containers; 200 L HDPE drums; 1000 L IBCs — all packagings fitted with vented closures

Catalogue SKUs covered by this SDS

Grade	HO assay	Pack size and SKU
Laboratory Reagent	29.0–31.0 %	25 L **205000162** · 50 L **205000163**
Analytical Reagent	29.0–32.0 %	25 L **205000262** · 50 L **205000263**
PV Pure	30.0–31.0 %	25 L **205000362** · 200 L **205000364** · 1000 L **205000381**
Ultrapure PPB	30.0–32.0 %	500 mL **205000423** · 1 L **205000441**

1.2 Relevant identified uses of the substance and uses advised against

- **Identified uses:** laboratory analytical reagent and oxidant; sample digestion and oxidative wet-chemical preparation; acidic and alkaline peroxide cleaning and etching mixtures; trace-metal (ppb) applications in semiconductor, photovoltaic and ICP-MS laboratories; research, quality-control and industrial laboratories; further formulation and repackaging by professional users.
- **Uses advised against:** not for food, drug, cosmetic, medicinal, pesticide, biocidal, disinfectant, hair-bleaching, household or consumer use. Not intended for use by the general public (hydrogen peroxide above 12 % w/w is a restricted explosives precursor in the EU). Not to be used in any application resulting in human ingestion or direct dermal application.

1.3 Details of the supplier of the safety data sheet

Supplier	**Highpuris LLC** 9920 Pacific Heights Blvd, Suite 150 San Diego, CA 92121-4361 United States of America
Telephone	+1 (401) 288-1196
E-mail (SDS contact)	admin@highpuris.com · noreply@highpuris.com
Website	www.highpuris.com

1.4 Emergency telephone number

24-hour emergency (USA / Canada)	**CHEMTREC 1-800-424-9300**
24-hour emergency (international)	**CHEMTREC +1 703-527-3887** (collect calls accepted)
CHEMTREC contract number	**CCN 1024800** — Highpuris LLC, registered August 2026. Quote this number when calling; it must appear with the emergency telephone number on shipping papers under 49 CFR 172.604
Non-emergency (business hours)	+1 (401) 288-1196, 09:00 – 17:00 Pacific Time, Monday to Friday

2 SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

Classification under 29 CFR 1910.1200 (OSHA HCS 2024), UN GHS Rev. 7, EU CLP (EC) No 1272/2008 and Canada HPR (US classification as given by the manufacturer for the 30 % solution):

Hazard class	Category	Hazard statement
Oxidizing liquids	Category 2	H272 — May intensify fire; oxidizer
Acute toxicity — oral	Category 4	H302 — Harmful if swallowed
Acute toxicity — inhalation (dusts and mists)	Category 4	H332 — Harmful if inhaled
Skin corrosion / irritation	Category 1A	H314 — Causes severe skin burns and eye damage
Serious eye damage / eye irritation	Category 1	H318 — Causes serious eye damage

H318 is not required on the label where H314 is assigned (GHS labelling precedence rules). The harmonised EU classification for hydrogen peroxide (Index No. 008-003-00-9) is Ox. Liq. 1, H271 (C ≥ 70 %); Ox. Liq. 2, H272 (50 % ≤ C < 70 %); Skin Corr. 1A, H314 (C ≥ 70 %); Skin Corr. 1B, H314 (50 % ≤ C < 70 %); Skin Irrit. 2, H315 (35 % ≤ C < 50 %); Eye Dam. 1, H318 (8 % ≤ C < 50 %); Eye Irrit. 2, H319 (5 % ≤ C < 8 %); STOT SE 3, H335 (C ≥ 35 %); Acute Tox. 4, H302 and H332. For a 29 – 32 % solution the EU outcome is therefore Eye Dam. 1, H318 and Acute Tox. 4, H302 — there is no oxidising-liquid class below 50 % in the EU, whereas US OSHA classification and US DOT still treat 20 – 40 % solutions as an oxidiser (Class 5.1). The US classification shown above is the more stringent and governs this sheet.

2.2 GHS label elements

Hazard pictograms — required on the label and on every shipped container:



GHS03 — Flame over circle



GHS05 — Corrosion



GHS07 — Exclamation mark

Pictograms must be a square set on a point, with a black symbol on a white ground and a red border wide enough to be clearly visible. Minimum size is one-fifteenth of the label surface area and never smaller than 10 mm × 10 mm (16 mm × 16 mm where the package holds more than 3 L). Where the corresponding DOT transport label is displayed on the outer packaging, the duplicate GHS pictogram may be omitted from that outer packaging under 29 CFR

1910.1200(f)(5); all pictograms remain required on the inner container label.

Signal word	**DANGER**
Hazard statements	H272 — May intensify fire; oxidizer. H302 — Harmful if swallowed. H332 — Harmful if inhaled. H314 — Causes severe skin burns and eye damage.

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.
- P221 — Take any precaution to avoid mixing with combustibles.
- P261 — Avoid breathing dust, fume, gas, mist, vapours or spray.
- P264 — Wash face, hands and any exposed skin thoroughly after handling.
- P270 — Do not eat, drink or smoke when using this product.
- P271 — Use only outdoors or in a well-ventilated area.
- P280 — Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary statements — Response

- P301 + P312 — IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
- P330 — Rinse mouth.
- P303 + P361 + P353 — IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304 + P340 + P312 — IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
- 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 or doctor.
- P370 + P378 — In case of fire: use CO_2, dry chemical or foam to extinguish (see Section 5 — water spray or fog is also suitable).

Precautionary statements — Storage and disposal

- P403 + P235 — Store in a well-ventilated place. Keep cool. Use vented closures only — do not store in a tightly sealed container.
- P405 — Store locked up.
- P501 — Dispose of contents and container to an approved waste disposal plant in accordance with federal, state, provincial and local regulations.

2.3 Other hazards which do not result in classification

- Unstable in the presence of contamination: decomposition to water and oxygen is accelerated by heat, light, metals (iron, copper, manganese, chromium and their salts), dust, rust and alkalis. The reaction is exothermic and liberates oxygen gas; in a closed container it can pressurise and rupture the container. Vented closures are mandatory — never store in a sealed container.
- Contact with combustible or organic materials (paper, wood, cloth, oil, solvents, clothing) can cause fire, and organic materials wetted with the solution may ignite spontaneously on drying. Contaminated product must never be returned to the original container.
- Skin contact causes whitening (blanching) of the skin from oxygen bubble formation in the tissue, followed by burning and pain; the effect is a recognised sign of exposure.
- Mixing with organic solvents (acetone, alcohols), reducing agents, ammonia or strong acids can form explosive or violently reactive mixtures. Do not use steel or aluminium tools or equipment.
- Mist and vapour are irritating to the eyes, nose and respiratory tract.
- The substance does not meet PBT or vPvB criteria under REACH Annex XIII and is not an identified endocrine disruptor.

2.4 Unknown acute toxicity

Not applicable. Acute toxicity data are available for the active component; no component of unknown acute toxicity is present.

3 SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture — aqueous solution, stabilised as necessary.

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Hydrogen peroxide	7722-84-1	231-765-0	29 – 32	Ox. Liq. 1, H271; Acute Tox. 4 (oral, inhalation), H302 + H332; Skin Corr. 1A, H314; STOT SE 3, H335 (harmonised classification of the pure substance)

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Water	7732-18-5	231-791-2	68 – 71	Not classified

EU Index number for hydrogen peroxide: 008-003-00-9. Specific concentration limits in EU CLP Annex VI: Ox. Liq. 1 / H271 and Skin Corr. 1A / H314 at C ≥ 70 %; Ox. Liq. 2 / H272 and Skin Corr. 1B / H314 at 50 % ≤ C < 70 %; Skin Irrit. 2 / H315 at 35 % ≤ C < 50 %; Eye Dam. 1 / H318 at 8 % ≤ C < 50 %; Eye Irrit. 2 / H319 at 5 % ≤ C < 8 %; STOT SE 3 / H335 at C ≥ 35 %.

Impurities and stabilising additives: the solution is stabilised as necessary with trace-level stabilisers that are not present at levels that alter the classification. PV Pure and Ultrapure PPB grades are controlled to trace-metal specification.

4 SECTION 4: FIRST-AID MEASURES

4.1 Description of first-aid measures

General. Move the casualty out of the danger area. Rescuers must protect themselves — wear eye/face protection, chemical-resistant gloves and, where mist or vapour is present, respiratory protection. Remove all contaminated clothing and footwear immediately while flushing; soak clothing in water before it dries, as it may ignite spontaneously. Never give anything by mouth to an unconscious or convulsing person. If symptoms persist, call a physician. Show this Safety Data Sheet to the attending physician.
Inhalation. Move the casualty to fresh air at once and keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. If breathing has stopped, give artificial respiration — do not use mouth-to-mouth; use a bag-valve mask or other mechanical device. Obtain medical attention immediately if symptoms occur. Pulmonary oedema may be delayed; keep the casualty under medical observation.
Skin contact. Immediately flush the affected area with copious quantities of water for at least 15 minutes (longer for large-area contact), removing contaminated clothing, shoes and jewellery while flushing. Skin may turn white (blanching); this usually fades but does not mean the exposure was harmless. Do not apply creams or neutralising agents. Obtain medical attention immediately for any burn, and if skin irritation persists, call a physician. Wash contaminated clothing, including the inside, before re-use.
Eye contact. Immediately rinse the eyes with plenty of water, also under the eyelids, for at least 15 minutes, holding the eyelids wide open. Remove contact lenses if present and if it can be done without delay; do not interrupt rinsing to do so. Obtain immediate medical attention from an ophthalmologist. Continue irrigation en route to medical care. Serious eye damage, including permanent corneal injury and blindness, may result.
Ingestion. Clean the mouth with water and then drink plenty of water. Do NOT induce vomiting — the solution releases oxygen in the stomach, and vomiting risks aspiration and re-exposure of the oesophagus. Do not give neutralising agents. Obtain medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Skin: whitening (blanching), stinging pain, redness, blistering and chemical burns on prolonged contact.
- Eyes: severe pain, lacrimation, corneal burns; causes eye burns with risk of permanent damage and blindness.
- Inhalation: irritation of the nose, throat and lungs, cough and shortness of breath; harmful if inhaled, and high concentrations of mist may cause chemical pneumonitis and delayed pulmonary oedema.
- Ingestion: burns of the mouth, throat and stomach; the oxygen released in the stomach can cause distension, belching, vomiting and, rarely, gas embolism.
- No other symptoms are reasonably foreseeable according to the manufacturer; the toxicological properties have not been fully investigated.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically and supportively; treat burns as chemical burns.
- Monitor the airway closely after inhalation; laryngeal oedema and bronchospasm may require early intubation. Observe for delayed-onset pulmonary oedema.
- Following ingestion, gastric distension from oxygen release may require decompression; endoscopy may be indicated to assess the extent of injury. Observe for signs of gas embolism.
- Do not use chemical neutralising agents on burns or in the gastrointestinal tract.

5 SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable: water spray or fog, applied in large quantities to cool containers and to dilute the oxidiser; carbon dioxide, dry chemical or foam as appropriate for the surrounding fire.
- Unsuitable: do NOT use a straight (solid) water stream — it may spread the burning material. Do not use media that would spread the liquid.

5.2 Special hazards arising from the substance or mixture

- Oxidiser (Category 2): the product is not itself combustible, but it supplies oxygen, may intensify fire and can ignite combustible materials (wood, paper, oil, clothing) on contact.
- Corrosive material. Containers may explode when heated: decomposition accelerates with temperature and liberates oxygen and heat, which can rupture sealed or blocked containers.

- Flash point and autoignition temperature: no information available (aqueous solution). The manufacturer reports explosion limits of 40 % (lower) and 100 % (upper) for hydrogen peroxide; the units are not stated and the aqueous solution is not a flammable liquid.
- Hazardous combustion and decomposition products: oxygen and, as stated by the manufacturer, hydrogen. Thermal decomposition can release irritating gases and vapours.
- In the event of fire and/or explosion do not breathe fumes. The product itself causes severe burns of the eyes, skin and mucous membranes; fire-fighting water run-off is corrosive and an oxidiser.

5.3 Advice for fire-fighters

- Wear a positive-pressure, pressure-demand self-contained breathing apparatus (NIOSH/MSHA-approved or equivalent) and full protective clothing. Structural fire-fighting turnout gear alone provides only limited protection against this material.
- Evacuate and isolate the area. Approach from upwind. Fight the fire from a protected position or from a distance, as containers may explode.
- Use water spray or fog to cool fire-exposed containers; withdraw immediately if a rising sound from a venting safety device or discolouration of a container occurs.
- Prevent run-off water from entering drains and watercourses; collect contaminated fire-fighting water separately for disposal.
- Refer to ERG 2024 Guide 140 (Oxidizers).

6 SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel. Ensure adequate ventilation. Evacuate non-essential personnel and move upwind. Restrict access. Do not walk through spilled material. Avoid all contact with liquid and mist, and keep combustible materials (paper, wood, cloth) away from the spill. Alert the site emergency response team.

For emergency responders. Do not attempt response without suitable PPE: chemical splash goggles with full face shield, chemical-resistant (non-combustible) suit and boots, neoprene, butyl or nitrile gloves, and a NIOSH-approved respirator with an inorganic-gas/particulate filter (EN 14387 type B plus particulate filter) or SCBA where mist or vapour concentrations are unknown or exceed exposure limits. Do not use steel or aluminium tools or equipment. Ventilate confined spaces before entry. Initial isolation of at least 50 m (150 ft) in all directions for a small liquid spill is recommended; increase the distance for large spills and consult ERG Guide 140.

6.2 Environmental precautions

- Prevent entry into drains, sewers, surface water, groundwater and soil. Dyke or bund the spill. The product should not be released into the environment (see Section 12).
- Hydrogen peroxide is harmful to aquatic organisms; large releases can cause local oxygen supersaturation, acidification and harm to aquatic life.
- Report releases as required by law. Hydrogen peroxide has no CERCLA reportable quantity, but state and local reporting requirements may apply, and a release may also need to be reported to the National Response Center (1-800-424-8802) where it causes harm to the environment.

6.3 Methods and material for containment and cleaning up

- Stop the leak if it can be done without risk. Upright leaking containers; do not return spilled or contaminated product to the original container.
- Dilute small spills and residues with plenty of water, which also removes the oxidising hazard, and flush to a suitable treatment system only where permitted.
- Soak up larger spills with inert, non-combustible absorbent — dry sand, earth, vermiculite or diatomaceous earth. Do NOT use combustible absorbents such as sawdust, paper, rags or cloth, which may ignite spontaneously on drying.
- Collect the absorbed material with non-sparking, non-metallic (plastic) tools into suitable, labelled plastic containers with vented closures for disposal. Do not seal the container tightly — contaminated peroxide continues to decompose and release oxygen. Keep it outdoors or in a well-ventilated area, away from combustibles.
- Flush the residual area with large volumes of water only after the bulk has been removed, collecting the wash water for disposal where required.
- Ventilate the area thoroughly before releasing it.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection, and Section 13 for disposal considerations.

7 SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Handle only in a well-ventilated area, in a chemical fume hood or under local exhaust ventilation. Wear personal protective equipment and face protection. Do not get in eyes, on skin or on clothing. Avoid ingestion and inhalation.

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Keep away from clothing and other combustible materials and take any precaution to avoid mixing with combustibles (paper, wood, cloth, oil, solvents).
- Vented closures are mandatory. Never store or transport in a sealed, non-vented container: decomposition is accelerated by heat, light, metals (iron, copper, manganese, chromium), dust, rust and alkalis, liberates oxygen and heat, and can pressurise and rupture the container.
- Do not use steel or aluminium tools or equipment. Use only compatible transfer equipment (polyethylene, polypropylene, PTFE, PVDF, glass, passivated 316L stainless steel in dedicated systems). Keep all equipment scrupulously clean; passivate and rinse with high-purity water before first use.
- Contaminated product must never be returned to the container. Use clean dispensing equipment only; do not allow dust, metal or organic contamination to enter the container.
- Open containers slowly to relieve any internal pressure; point the opening away from the face and body.
- Do not eat, drink or smoke in the handling area. Wash hands and exposed skin thoroughly after handling.
- Ensure an emergency eyewash station and safety shower are within 10 seconds' unobstructed travel of the work area. Spills should be diluted with plenty of water immediately; wet clothing and rags that have contacted the solution should be rinsed with water before drying, as they can ignite spontaneously.
- Empty containers retain product residue and remain hazardous — rinse with water, do not cut, weld, drill or reuse.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Keep containers in a dry, cool, well-ventilated place with vented closures fitted; protect from direct sunlight and sources of heat. Containers should be vented periodically (and must have vented closures fitted) to overcome any pressure build-up. Do not store near combustible materials. Keep locked up or in an area accessible only to authorised, trained personnel. Store as an oxidiser in accordance with NFPA 400.
Recommended temperature	Keep refrigerated to maintain product quality (manufacturer's recommendation). Do not allow the product to approach its decomposition temperature (> 125 °C); avoid prolonged storage at elevated temperature. Freezing is not a concern for the 29 – 32 % solution (freezing point approximately −33 °C).
Containment	Store on a bunded or kerbed floor of non-combustible, non-porous construction, with secondary containment of at least 110 % of the largest container, and with a water supply available for dilution. Segregate from other chemical classes.
Suitable materials	Original supplier packaging: HDPE containers fitted with vented closures. Other compatible materials: polyethylene, polypropylene, PTFE, PVDF, glass and passivated high-grade (316L) stainless steel or high-purity aluminium in dedicated, passivated systems.
Unsuitable materials	Do not store in metal containers. Carbon steel, iron, copper, brass, bronze, lead, zinc, galvanised surfaces, manganese and their alloys catalyse decomposition; unpassivated aluminium and steel are incompatible. Wood, paper, cloth and other combustible or organic materials; rust and dust.
Incompatible storage	Segregate from strong oxidising agents, strong reducing agents, metals (copper and copper alloys, lead, aluminium), lead oxides, alcohols, acetone and other organic solvents, ammonia, cyanides, sulfides, alkalis and all combustible materials. Do not store with flammable liquids or organics in the same cabinet.
Shelf life	Limited. Hydrogen peroxide decomposes slowly even when stored correctly; the assay falls over time. Use within the retest period shown on the certificate of analysis. Ultrapure grades should be opened only in a clean environment, after which trace-metal levels can no longer be guaranteed against the released specification.

7.3 Specific end use(s)

Laboratory reagent, oxidant and industrial process chemical. No further specific guidance beyond the identified uses in Section 1.2.

8 SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits — hydrogen peroxide (CAS 7722-84-1)

Source	Type	Value
OSHA PEL (29 CFR 1910.1000, Table Z-1)	8-hour TWA	1 ppm (1.4 mg/m^3)
NIOSH REL	TWA	1 ppm (1.4 mg/m^3)

Source	Type	Value
ACGIH TLV	8-hour TWA (A3 — confirmed animal carcinogen with unknown relevance to humans)	1 ppm
NIOSH IDLH	Immediately dangerous to life or health	75 ppm
Cal/OSHA PEL (8 CCR 5155)	8-hour TWA	1 ppm
Mexico OEL (NOM-010-STPS)	TWA	1 ppm
EU IOELV (Directive 2000/39/EC and later)	8-hour TWA / STEL	None established
Germany AGW (TRGS 900)	8-hour TWA	0.5 ppm (0.71 mg/m^3)

8.2 Exposure controls

Appropriate engineering controls

- Use in a well-ventilated area, preferably in a certified chemical fume hood with a minimum face velocity of 0.5 m/s (100 ft/min), or under equivalent local exhaust ventilation captured at the point of generation. Ensure adequate ventilation, especially in confined areas.
- Provide general dilution ventilation sufficient to keep airborne concentrations below the exposure limits. Fume-hood and ducting surfaces should be of non-combustible, peroxide-compatible construction.
- Safety shower and eyewash station must be immediately available close to the workstation (ANSI/ISEA Z358.1).

Eye and face protection

- Chemical splash goggles conforming to ANSI/ISEA Z87.1, 29 CFR 1910.133 or EN 166, worn together with a full face shield whenever there is any risk of splashing, pouring or pressurised release. Ordinary safety spectacles are not adequate.

Skin and body protection

- Gloves: wear appropriate protective gloves to prevent skin exposure. Neoprene, butyl rubber, nitrile rubber, PVC and Viton® give good resistance to 30 % hydrogen peroxide; natural rubber latex is not recommended, and leather or cotton gloves must not be used, because they are combustible and may ignite when contaminated. Confirm performance with the glove manufacturer for the specific task.
- Body: appropriate protective clothing to prevent skin exposure — a chemical-resistant apron or coveralls (PVC, neoprene or similar) over a laboratory coat for small-scale work; a full chemically resistant suit (Type 3/4, EN 14605) with hood for bulk transfer, drumming and spill response. Do not wear cotton, leather or wool garments that can become contaminated.
- Feet: closed, chemically resistant boots or overboots (rubber or PVC; no leather). Trouser legs worn outside the boots.
- Hygiene: handle in accordance with good industrial hygiene and safety practice. Change contaminated clothing immediately and rinse it with water before it dries.

Respiratory protection

- Not normally required where work is carried out in an effective fume hood. Follow the OSHA respirator regulations in 29 CFR 1910.134 or European Standard EN 149; use a NIOSH/MSHA or EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- Recommended filter type: particulate filter conforming to EN 143 and an inorganic gases and vapours filter, Type B (grey), conforming to EN 14387, within its assigned protection factor.
- For unknown concentrations, oxygen-deficient atmospheres, emergency response or concentrations at or above 75 ppm (IDLH), use a positive-pressure self-contained breathing apparatus or a supplied-air respirator with escape bottle.
- Respirator use requires a written programme under 29 CFR 1910.134, including medical evaluation, fit testing and training.

Environmental exposure controls

- Do not release into the environment. Dilute large quantities of effluent to a very low concentration and allow decomposition to complete before discharge, in accordance with the permit of the receiving authority.

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Value
Physical state	Liquid
Colour	Colourless
Odour	Slight
Odour threshold	No information available

Property	Value
Melting point / freezing point	−33 °C (−27.4 °F)
Boiling point / initial boiling point	108 °C (226.4 °F) at 101.3 kPa (760 mmHg)
Flammability	No data available. Not classified as a flammable liquid; the product is an oxidiser and can ignite combustible materials
Lower / upper explosion limit	Manufacturer data: 40 % / 100 % (units not stated); the aqueous solution is not a flammable liquid
Flash point	No information available
Auto-ignition temperature	No data available
Decomposition temperature	> 125 °C (257 °F)
pH	3.3
Kinematic / dynamic viscosity	No data available
Solubility (water)	Soluble; miscible with water in all proportions
Solubility (other)	No information available
Partition coefficient n-octanol/water (log Kow)	−1.1 (hydrogen peroxide)
Vapour pressure	No data available
Density / relative density	1.110 (specific gravity)
Relative vapour density	1.10 (air = 1)
Particle characteristics	Not applicable (liquid)
Molecular weight	34.01 g/mol (H_2O_2)
Evaporation rate	1.0 (n-butyl acetate = 1)
Oxidising properties	Oxidiser (Category 2 under US OSHA classification)
Explosive properties	Not explosive
Surface tension	No data available
Concentration	29.0 – 31.0 % w/w (Laboratory Reagent); 29.0 – 32.0 % w/w (Analytical Reagent); 30.0 – 31.0 % w/w (PV Pure); 30.0 – 32.0 % w/w (Ultrapure PPB)

9.2 Other information

No additional physical or chemical hazard information. Test data above are those reported by the manufacturer for hydrogen peroxide solution of 20 – 35 % and relate to the product as supplied; values for individual grades in the 29 – 32 % range may differ slightly.

10 SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactive hazard: yes. A strong oxidiser that decomposes exothermically to water and oxygen, a reaction catalysed by metals and their salts, alkalis, dust, rust and light, and accelerated by heat. Contact with combustible or organic material may cause fire.

10.2 Chemical stability

Sensitive to light and heat. Stable under the recommended storage and handling conditions when kept in clean, vented, original packaging; contamination makes it unstable. No data available on sensitivity to mechanical impact or static discharge. Hazardous polymerisation does not occur.

10.3 Possibility of hazardous reactions

- Contact with combustible or organic material (wood, paper, cloth, oil, solvents) may cause fire or spontaneous ignition on drying. No hazardous reactions under normal processing when kept clean and vented.
- Decomposition liberates oxygen and heat; in a closed or blocked container the pressure build-up can rupture the container and spray corrosive liquid.
- Violent or explosive reaction with strong reducing agents, alcohols, acetone and other organic solvents, ammonia, cyanides and sulfides.
- Rapid, exothermic decomposition on contact with metals and their salts — copper and copper alloys, lead and lead oxides, aluminium, iron, manganese and chromium.

- Reaction with alkalis accelerates decomposition; reaction with strong acids, particularly in the presence of organics, can form unstable peroxy compounds.

10.4 Conditions to avoid

Incompatible products; excess heat; exposure to light; combustible material; contamination with metals, dust, rust or alkalis; confinement of evolved oxygen in closed or non-vented containers.

10.5 Incompatible materials

Class	Examples
Strong oxidising and reducing agents	Strong oxidising agents; strong reducing agents; permanganates; chromates; sulfites
Metals and alloys	Copper and copper alloys, lead, aluminium, iron, steel, manganese, chromium and their salts
Metal oxides	Lead oxides, manganese dioxide, iron oxide (rust)
Alcohols and organics	Alcohols, acetone, organic solvents, oils, combustible material (wood, paper, cloth)
Ammonia and bases	Ammonia, alkalis and amines (catalyse rapid decomposition)
Cyanides and sulfides	Cyanides; sulfides

10.6 Hazardous decomposition products

Oxygen (O_2) and water on normal decomposition; the manufacturer also lists hydrogen as a hazardous decomposition/combustion product. Irritating gases and vapours on thermal decomposition.

11 SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in 29 CFR 1910.1200(c) / GHS

Likely routes of exposure: skin and eye contact, inhalation of mist or vapour, and accidental ingestion.

Endpoint	Data and conclusion
Acute toxicity — oral	LD_{50} (rat): 910 mg/kg bw (20 – 60 % solution); 1,518 mg/kg bw (8 – 20 % solution); 376 mg/kg bw (90 % solution). May be harmful if swallowed. Classified Acute Toxicity Category 4 (H302).
Acute toxicity — dermal	LD_{50} (rabbit): > 2,000 mg/kg bw. Not classified for acute dermal toxicity; local corrosion governs.
Acute toxicity — inhalation	LC_{50} (rat, 4 h): 2,000 mg/m³ (2 mg/L). Harmful by inhalation. Classified Acute Toxicity Category 4, dusts and mists (H332).
Skin corrosion / irritation	Causes burns; corrosive. Classified Skin Corrosion Category 1A (H314) in the manufacturer's US OSHA classification for the 20 – 35 % solution. No study data are given by the manufacturer. Note: the harmonised EU concentration limits would give no skin classification below 35 %.
Serious eye damage / irritation	Corrosive to the eyes and may cause severe damage including blindness. Classified Eye Damage Category 1 (H318), assigned by the bridging principle "Dilution".
Respiratory or skin sensitisation	No data available. Not classified.
Germ cell mutagenicity	No data available. Not classified.
Carcinogenicity	ACGIH A3 (confirmed animal carcinogen with unknown relevance to humans); Mexico A3. Not listed by IARC, NTP or OSHA as a carcinogen. Not classified.
Reproductive toxicity	No data available. Not classified.
STOT — single exposure	No data available. Not classified in the US classification; mist and vapour are irritating to the respiratory tract (STOT SE 3 / H335 applies in the EU only at concentrations ≥ 35 %).
STOT — repeated exposure	No data available. Not classified. Target organs: no information available.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2 Other information

Target organs: eyes, skin, mucous membranes and respiratory tract. Persons with pre-existing skin disorders, eye disease or chronic respiratory disease may be at increased risk from exposure. Symptoms and delayed effects: no information available beyond those in Section 4. Endocrine disrupting properties: this product does not contain any known or suspected endocrine disruptors.

The toxicological properties of this product have not been fully investigated in all endpoints; the assessment above is based on the manufacturer's data for hydrogen peroxide solutions of 20 – 35 %, on the properties of hydrogen peroxide and its corrosivity, which is the determining factor for local effects.

12 SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Endpoint	Value
Fish — acute	LC_{50} (Pimephales promelas, fathead minnow, 96 h): 16.4 mg/L.
Aquatic invertebrates — acute	EC_{50} (water flea, 24 h): 7.7 mg/L.
Algae	EC_{50} (freshwater algae, 72 h): 2.5 mg/L.
Microorganisms	No data available (Microtox: not listed by the manufacturer).

Hydrogen peroxide is harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment, according to the manufacturer; algae are the most sensitive trophic level. In the environment it decomposes rapidly to water and oxygen, particularly in the presence of organic matter, metals and light, so exposure is short-lived.

12.2 Persistence and degradability

Persistence is unlikely. The substance decomposes (to water and oxygen) and is soluble in water.

12.3 Bioaccumulative potential

No information available. Not expected to bioaccumulate: log Kow = −1.1.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility; rapid decomposition limits transport.

12.5 Results of PBT and vPvB assessment

The substance does not meet the criteria for PBT or vPvB under REACH Annex XIII.

12.6 Other adverse effects

Germany water hazard class WGK 1 (slightly hazardous to water). Not an ozone-depleting substance; global warming potential not applicable.

13 SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste under 40 CFR 261 and must consult federal, state, regional and local hazardous waste regulations to ensure complete and accurate classification.
- Dispose of surplus and non-recyclable material via a licensed hazardous-waste contractor at an approved waste disposal plant. Do not discharge concentrated product to sewers, drains or watercourses.
- Do not seal waste or contaminated product in a tightly closed container: decomposition continues and liberates oxygen and heat. Keep waste in vented, compatible plastic containers and never mix with organic solvents, other chemical waste or combustible material.
- Small laboratory quantities may be diluted with a large excess of water, or reduced with a suitable reducing agent (for example sodium sulfite or thiosulfate) by trained personnel, before disposal in accordance with the receiving authority's permit; the reaction is exothermic — never carry it out in a closed container.
- Empty containers retain product residue and remain hazardous. Triple-rinse with water, collecting the rinsate for permitted disposal, before offering for recycling or reconditioning; otherwise dispose of the container as unused product. Deface or remove the label from a properly cleaned container.
- Dispose of the container in accordance with local regulations. RCRA "empty" criteria are set out in 40 CFR 261.7.

13.2 Waste codes

RCRA (40 CFR 261): discarded unused product exhibits the ignitability characteristic (oxidiser per 40 CFR 261.21(a)(4)) — EPA hazardous waste number D001; D002 (corrosivity) does not normally apply at this concentration. Not a P- or U-listed commercial chemical product. European waste catalogue: EWC code 16 09 03* (peroxides, e.g. hydrogen peroxide) or 16 05 06* (laboratory chemicals consisting of or containing hazardous substances). Final code allocation is the responsibility of the waste producer.

14 SECTION 14: TRANSPORT INFORMATION

This product is a regulated dangerous good in all modes of transport.

14.1 Common transport classification (all modes)

UN number / UN ID number	UN 2014
UN proper shipping name	Hydrogen peroxide, aqueous solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)
Transport hazard class	Class 5.1 — Oxidizing substances
Subsidiary hazard	Class 8 — Corrosive
Packing group	II
Label(s) required	Class 5.1 "Oxidizer" (yellow) and Class 8 "Corrosive" (white upper half / black lower half) — both labels on every package
Environmental hazards	Not classified as a marine pollutant under the IMDG Code and not an environmentally hazardous substance under ADR/RID.
Special precautions for user	Transport upright, secured against movement, in packagings fitted with vented closures — never in sealed containers. Keep away from heat, sunlight and combustible materials. Segregate from flammable liquids and solids, organic materials, reducing agents, bases and metals. Contaminated product must not be returned to the container.
Transport in bulk (MARPOL Annex II / IBC Code)	Not applicable to packaged goods. For bulk carriage by sea, consult IBC Code Chapters 17 – 18 and the ship's Certificate of Fitness.

Transport hazard label(s) required on the package:



Class 5.1 — Oxidizer



Class 8 — Corrosive

Minimum 100 mm × 100 mm on each side, set on a point, with a solid inner line 5 mm inside the edge (49 CFR 172.407). Reduced-size labels are permitted only where the package is too small to bear a full-size label. Where a subsidiary hazard label is required, it is displayed next to the primary label.

14.2 US DOT — 49 CFR (road, rail and domestic transport)

Hazardous materials table entry	Hydrogen peroxide, aqueous solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary) — 5.1, UN2014, PG II
Label codes	5.1, 8
Special provisions (49 CFR 172.102)	A2, A3, A6, B53, IB2, IP5, T7, TP2, TP6, TP24, TP37
Packaging — exceptions	49 CFR 173.152
Packaging — non-bulk	49 CFR 173.202
Packaging — bulk	49 CFR 173.243
Quantity limitation — passenger aircraft/rail	1 L
Quantity limitation — cargo aircraft only	5 L
Vessel stowage	Location D; other stowage provisions 25, 66, 75
Limited quantity	Authorised under 49 CFR 173.152(b): inner packagings not exceeding 1.0 L, package gross mass not exceeding 30 kg. Limited quantity marking required in place of labels. Packagings must be vented (49 CFR 173.24(g)) and inner receptacles must be of compatible plastics.
Reportable quantity (RQ)	Not listed — hydrogen peroxide has no CERCLA reportable quantity; no "RQ" designation is required.
ERG 2024 guide number	140 — Oxidizers
Emergency response telephone	Required on the shipping paper under 49 CFR 172.604 — see Section 1.4
Placarding	OXIDIZER placard required for bulk packagings and for non-bulk shipments where the aggregate gross weight of Table 2 materials is 454 kg (1,001 lb) or more.

14.3 IMDG Code (sea)

UN number / class / PG	UN 2014, Class 5.1 (8), PG II
Proper shipping name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20 % but not more than 60 % hydrogen peroxide (stabilized as necessary)
EmS (emergency schedules)	F-H (fire) and S-Q (spillage)
Segregation group	Segregate from flammable liquids and solids, organic materials, reducing agents and bases; refer to the IMDG segregation table
Marine pollutant	No
Limited quantity	1 L
Excepted quantity	E2
Stowage and segregation	Stowage category D. Packaging provision PP10 (vented closures required). Refer to the IMDG Code edition in force for the stowage category and segregation table.

14.4 IATA DGR / ICAO Technical Instructions (air)

UN number / class / PG	UN 2014, Class 5.1 (8), PG II
Proper shipping name	Hydrogen peroxide, aqueous solution
Passenger aircraft	Packing Instruction 550 — maximum net quantity 1 L per package
Cargo aircraft only	Packing Instruction 554 — maximum net quantity 5 L per package
Limited quantity (passenger aircraft)	Packing Instruction Y540 — maximum net quantity 0.5 L per package
Excepted quantity code	E2
ERG code (ICAO)	5C
Note	Vented closures are required. Packing instruction numbers change between editions of the IATA Dangerous Goods Regulations. Verify against the edition in force on the date of shipment before completing the Shipper's Declaration.

14.5 ADR / RID / ADN (European road, rail and inland waterway)

UN number / class / PG	UN 2014, Class 5.1, PG II
Classification code	OC1 — oxidising substances, corrosive, liquid
Labels	5.1 + 8
Tunnel restriction code	(E)
Hazard identification number (Kemler)	58
Transport category / limited quantity	Transport category 2; limited quantity 1 L
Packing instructions	P504, IBC02; special provision 65
Note	Verify against the ADR/RID edition in force before shipment.

14.6 Shipping documentation example

UN2014, Hydrogen peroxide, aqueous solution, 5.1, (8), PG II — followed by the number and type of packages, total quantity, packaging authorisation, emergency response telephone number and, where applicable, the limited-quantity marking.

The shipper is responsible for confirming that packaging is UN-performance tested and marked to the required standard, that all personnel involved are trained and certified under 49 CFR 172 Subpart H (and IATA/IMDG equivalents), and that the classification remains valid under the regulatory edition in force on the date of shipment.

15 SECTION 15: REGULATORY INFORMATION

15.1 United States federal regulations

Regulation	Status
TSCA (15 U.S.C. §2601 et seq.)	Hydrogen peroxide, CAS 7722-84-1, is listed on the TSCA Chemical Substance Inventory with an "active" designation. No TSCA section 12(b) export notification requirement applies. Not subject to a section 5(a)(2) significant new use rule and not a TSCA 6(h) PBT substance.
OSHA Hazard Communication (29 CFR 1910.1200)	Classified as a hazardous chemical (oxidiser, acute toxicity, skin corrosion, serious eye damage). This SDS is prepared to the HCS 2024 amendment (GHS Rev. 7), for which the compliance date for substances was 19 May 2026.
OSHA flammable liquids (29 CFR 1910.106)	Not a flammable or combustible liquid; 29 CFR 1910.106 does not apply. The product is an oxidiser — store and handle in accordance with the oxidiser provisions of NFPA 400 and local fire codes.
OSHA PSM (29 CFR 1910.119, App. A)	"Hydrogen peroxide (52 % by weight or greater)", threshold quantity 7,500 lb — not applicable to this product at 29 – 32 %.
CERCLA section 103 (40 CFR 302.4)	Not listed — hydrogen peroxide has no CERCLA reportable quantity.
EPCRA section 302 (40 CFR 355, App. A)	Extremely hazardous substance listing is "Hydrogen peroxide (conc > 52 %)", threshold planning quantity 1,000 lb — not applicable to this product at 29 – 32 %.
EPCRA sections 311 / 312 (40 CFR 370)	Reportable. Applicable hazard classes: oxidizer, acute toxicity, skin corrosion or irritation (Category 1A) and serious eye damage or eye irritation (Category 1). Reporting threshold 10,000 lb on site at any one time.
EPCRA section 313 (TRI, 40 CFR 372)	Not listed. No Toxics Release Inventory reporting requirement.
Clean Air Act section 112 / 112(r)	Not a listed hazardous air pollutant. Section 112(r) lists "Hydrogen peroxide (conc 52 % or greater)", threshold quantity 7,500 lb — not applicable to this product at 29 – 32 %.
Clean Water Act section 311 (40 CFR 116/117)	Not designated as a hazardous substance under section 311.
RCRA (40 CFR 261)	Discarded unused product exhibits the ignitability characteristic as an oxidiser (D001, 40 CFR 261.21(a)(4)). D002 does not normally apply at this concentration. Not P- or U-listed.
DEA / Chemical Diversion and Trafficking Act (21 CFR 1310)	Not a List I or List II regulated chemical.
FDA / USDA	Not supplied as a food-grade, USP, FCC or NF material. Not for use in food, drug or cosmetic applications.
US Department of Homeland Security (6 CFR 27, App. A)	"Hydrogen peroxide (conc 35 % or greater)" is a chemical of interest (theft/diversion; screening threshold quantity 400 lb). This product at 29 – 32 % is below the threshold; batches must not exceed 35 %.

15.2 United States state regulations

State list	Status
California Proposition 65	Hydrogen peroxide is not listed under the Safe Drinking Water and Toxic Enforcement Act of 1986. No Proposition 65 warning is required for this product.
California — other	Cal/OSHA PEL 1 ppm TWA.
Massachusetts Right-to-Know	Listed (Substance List, 105 CMR 670).
New Jersey Right-to-Know	Listed (Hazardous Substance List; substance list). Special Health Hazard Substance — oxidizer.
Pennsylvania Right-to-Know	Listed (Hazardous Substance List).
Rhode Island, Minnesota, Texas	Listed on the Rhode Island and Minnesota hazardous substance / right-to-know lists. Not listed: Illinois. Texas: not assessed in the source data — verify before sale into Texas.

15.3 International regulations

Jurisdiction	Status
Canada	Classified under the Hazardous Products Regulations (SOR/2015-17) consistently with Section 2. Listed on the Domestic Substances List (DSL). Not subject to NPRI reporting.
European Union — CLP	Harmonised classification, Annex VI to Regulation (EC) No 1272/2008, Index No. 008-003-00-9, with the specific concentration limits given in Section 3. For 29 – 32 % solutions the harmonised outcome is Eye Dam. 1, H318 and Acute Tox. 4, H302; no oxidising-liquid class applies below 50 %.

Jurisdiction	Status
European Union — REACH	Registered substance. Not on the Candidate List of substances of very high concern and not subject to authorisation (Annex XIV). Annex XVII restriction entry 75 (tattoo inks) applies to the use of the substance in tattoo inks only. Supplier REACH registration number to be inserted before EU/EEA placement. Regulation (EU) 2019/1148 on explosives precursors: hydrogen peroxide above 12 % w/w is a restricted explosives precursor — supply to the general public is prohibited, and above 35 % a licence is required. Sales to professional users in the EU/EEA must comply with this Regulation.
Seveso III (Directive 2012/18/EU)	Named substance "hydrogen peroxide (≥ 50 %)": lower tier 50 t / upper tier 200 t — not applicable below 50 %.
Rotterdam / Stockholm / Montreal Conventions	Not listed under the PIC procedure, not a persistent organic pollutant and not an ozone-depleting substance.
Basel Convention	Not individually listed; classify by hazard characteristic H5.1 (oxidising) when exported as waste.
Chemical Weapons Convention	Not a scheduled chemical.
Chemical inventories	Listed on TSCA (USA), DSL (Canada), EC Inventory / REACH (EU), AICS/AIIC (Australia), IECSC (China), ENCS and ISHL (Japan), KECI (Korea), PICCS (Philippines), NZIoC (New Zealand), TCSI (Taiwan) and the Indian Chemical Inventory.
Mexico	OEL (NOM-010-STPS): TWA 1 ppm. Mexico hazard grade: no information available.
Germany	Water Hazard Class WGK 1 (slightly hazardous to water).

15.4 Chemical safety assessment

A chemical safety assessment has been carried out for hydrogen peroxide under REACH by the registrant consortium. No exposure scenarios are annexed to this SDS; users placing the substance on the EU/EEA market should obtain the extended SDS from the registrant.

16 SECTION 16: OTHER INFORMATION

16.1 Hazard rating systems

System	Rating	Notes
NFPA 704	Health 3 · Flammability 0 · Instability 1 · Special: OX	Health rating and OX symbol as given by the manufacturer for the 20 – 35 % solution
HMIS® III	Health 3 · Flammability 0 · Physical hazard 1 · PPE: X	PPE code to be assigned by the employer based on the task



Rating scale 0 = minimal, 4 = severe. These ratings are supplementary and are not a substitute for the GHS classification in Section 2.

16.2 Full text of hazard statements referred to in this SDS

- H271 — May cause fire or explosion; strong oxidiser.
- H272 — May intensify fire; oxidiser.
- H302 — Harmful if swallowed.
- H314 — Causes severe skin burns and eye damage.
- H315 — Causes skin irritation.
- H318 — Causes serious eye damage.
- H319 — Causes serious eye irritation.
- H332 — Harmful if inhaled.
- H335 — May cause respiratory irritation.

16.3 Abbreviations and acronyms

Abbreviation	Meaning
ACGIH	American Conference of Governmental Industrial Hygienists
ADR / RID / ADN	European agreements concerning the international carriage of dangerous goods by road / rail / inland waterway
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging

Abbreviation	Meaning
DNEL / PNEC	Derived no-effect level / predicted no-effect concentration
EmS	Emergency schedule (IMDG Code)
EPCRA	Emergency Planning and Community Right-to-Know Act
ERG	Emergency Response Guidebook (PHMSA / Transport Canada / SCT)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HCS	Hazard Communication Standard, 29 CFR 1910.1200
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA DGR	International Air Transport Association Dangerous Goods Regulations
IDLH	Immediately dangerous to life or health
IMDG	International Maritime Dangerous Goods Code
LC_{50} / LD_{50} / EC_{50}	Concentration / dose / effective concentration lethal or effective to 50 % of a test population
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PBT / vPvB	Persistent, bioaccumulative and toxic / very persistent and very bioaccumulative
PEL / REL / TLV	Permissible exposure limit / recommended exposure limit / threshold limit value
PG	Packing group
RCRA	Resource Conservation and Recovery Act
RQ / TPQ / TQ	Reportable quantity / threshold planning quantity / threshold quantity
SCBA	Self-contained breathing apparatus
STOT SE / RE	Specific target organ toxicity — single exposure / repeated exposure
TSCA	Toxic Substances Control Act
TWA / STEL	Time-weighted average / short-term exposure limit
WGK	Wassergefährdungsklasse (German water hazard class)

16.4 Key references

- 29 CFR 1910.1200, OSHA Hazard Communication Standard, as amended by the final rule of 19 July 2024 (89 FR 44144), aligning with GHS Revision 7.
- 49 CFR Parts 171–180, US DOT Hazardous Materials Regulations; Hazardous Materials Table, 49 CFR 172.101.
- 2024 Emergency Response Guidebook, Guide 140.
- IMDG Code and IATA Dangerous Goods Regulations, editions in force.
- 40 CFR 302.4, 40 CFR 355 Appendix A, 40 CFR 370, 40 CFR 372, 40 CFR 68.130, 40 CFR 261 and 6 CFR Part 27 Appendix A.
- Regulation (EC) No 1272/2008 Annex VI, Index No. 008-003-00-9; Regulation (EC) No 1907/2006 Annex II; Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.
- NIOSH Pocket Guide to Chemical Hazards, hydrogen peroxide; ACGIH TLVs and BEIs, current edition.
- Manufacturer safety data sheet for hydrogen peroxide 20–35 % (US OSHA HCS 2024 format, revision 1, 17 August 2026) — source of the physical, toxicological and ecotoxicological test values reproduced here.
- ECHA registered substance dossier and PubChem CID 784, hydrogen peroxide.

16.5 Revision information

Version	1.0
Date of issue	01 November 2026

Reason for revision	First issue under Highpuris LLC. Content prepared in the 16-section format of 29 CFR 1910.1200, Appendix D, with full US DOT 49 CFR transport detail, IMDG / IATA / ADR classification, and the complete Highpuris catalogue SKU list for hydrogen peroxide (29–32 %).
Sections revised	All — first issue
Prepared by	Regulatory Affairs, Highpuris LLC

16.6 Disclaimer

The information in this Safety Data Sheet is provided in good faith and is believed to be accurate as at the date of issue. It has been compiled from data on hydrogen peroxide (29–32 %) published by regulatory authorities, manufacturers and recognised technical sources, and relates only to the specific material identified in Section 1. It does not constitute a warranty, express or implied, of merchantability, fitness for a particular purpose or of any other kind, and Highpuris LLC accepts no liability for loss or damage arising from the handling or use of the product. The material may present hazards in combination with other substances or in processes not described here. It is the responsibility of the user to determine the suitability of this information for their own particular purpose, to comply with all applicable laws and regulations, and to ensure that the material is handled only by adequately trained personnel. Transport classifications, exposure limits and regulatory listings change. This document must be reviewed against the regulatory editions in force at the date of each shipment.

— END OF SAFETY DATA SHEET —

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