Safety Data Sheet · OSHA HCS 2024

Hydrogen Peroxide 5% ACS Grade

ACS Grade · 5%

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Hydrogen Peroxide 5% ACS Grade
Grade	ACS Grade
Concentration	5% w/w
CAS Number	7722-84-1
Chemical Formula	H2O2
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Hydrogen dioxide; peroxide solution; H2O2
Recommended Use	Laboratory and analytical reagent (ACS grade); oxidizing and bleaching agent; cleaning.
Restrictions on Use	Keep away from metals and organic materials, which make it decompose. Never return unused peroxide to the original container (contamination causes decomposition and pressure). Not for medical, cosmetic or food use.

2 Hazard Identification



Corrosive

Classification	Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 1
Signal Word	**Danger**
Hazard Statements	H315 Causes skin irritation H318 Causes serious eye damage

Precautionary Statements

P264 Wash hands and face thoroughly after handling.

P280 Wear protective gloves, protective clothing, and eye/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

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.

P321 Specific treatment (see first-aid information on this label).

P332+P313 If skin irritation occurs: Get medical advice or attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Hydrogen peroxide	7722-84-1	H2O2	4.5-5.5% (w/w)
Water	7732-18-5	H2O	Balance (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes
Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation
Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion
Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects
Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent.

Skin contact causes irritation: redness, itching and pain; repeated contact may dry and crack the skin.

Immediate Medical Attention and Special Treatment
Immediate medical attention is required after eye contact; eye damage may continue after exposure ends.

5 Fire-Fighting Measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical
Containers may rupture when heated.

Protective Equipment
Wear self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products
Oxygen (supports combustion) and heat; pressure can build in closed or unvented containers.

6 Accidental Release Measures

Personal Precautions
Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent leakage or spillage from entering drains, sewers, or waterways.

Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Store in the original vented container, cool and out of sunlight, away from combustibles, organics and metals. Never return material to the container. Use only clean, compatible equipment (high-purity aluminum, stainless steel, HDPE, glass).

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	1 ppm TWA
ACGIH TLV	1 ppm TWA (A3: confirmed animal carcinogen with unknown relevance to humans)
NIOSH REL	1 ppm TWA
IDLH	75 ppm
Other Limits	NIOSH IDLH 75 ppm

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear colorless liquid with slight viscosity
Odor	Odorless to faintly sharp
Odor Threshold	No data available
pH	Not determined
Melting Point / Freezing Point	Approx. −3 °C (27 °F), freezing point (calculated for this solution)
Boiling Point	Approx. 101 °C (213 °F) (calculated for this solution)
Flash Point	Not applicable
Evaporation Rate	No data available

Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	Approx. 17 mmHg at 20 °C (mostly water vapor)
Vapor Density	No data available
Relative Density	1.018 at 20/20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No fixed temperature; decomposes slowly at room temperature, faster with heat, light, metals and contamination
Viscosity	No data available
Particle Characteristics	Not applicable
Form	Liquid
Density	1.0160 g/cm^3 at 20 °C

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sunlight and UV light, contamination of any kind, shock and friction. Containers must stay vented.
Incompatible Materials	Combustible and organic materials (paper, wood, oils, solvents such as acetone and alcohols); reducing agents; metals and metal salts, especially iron, copper, brass and lead (catalyze violent decomposition); cyanides and sulfides; strong acids and bases; ammonia.
Hazardous Decomposition Products	Oxygen (supports combustion) and heat; pressure can build in closed or unvented containers.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent. Skin contact causes irritation: redness, itching and pain; repeated contact may dry and crack the skin.
Delayed and Chronic Effects	Repeated skin contact may cause dermatitis (dry, cracked skin).

Route	Value
LD50 Oral (rat)	1,518 mg/kg for 8–20% solutions (this product is more dilute)
LD50 Dermal (rabbit)	2,000–9,200 mg/kg (hydrogen peroxide)

Route	Value
LC50 Inhalation (rat, 4h)	2 mg/L (2,000 mg/m^3) (hydrogen peroxide)

Carcinogen Classification

Agency	Status
IARC	Group 3 — not classifiable as to its carcinogenicity to humans (Hydrogen peroxide; IARC agent: Hydrogen peroxide, Vol. 36, Sup 7, 71).
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Data not available. Avoid release to the environment.
Persistence & Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	Not a P- or U-listed waste. Below 8% hydrogen peroxide it is not a DOT oxidizer (no D001), and at a typical pH of about 3 it is not D002 corrosive; the generator makes the final hazardous-waste determination.

14 Transport Information

Not regulated for transport under US DOT 49 CFR Subchapter C, IMDG, or IATA DGR.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed
CERCLA Reportable Quantity (RQ)	Not a CERCLA hazardous substance (no RQ). EPCRA section 302 applies to hydrogen peroxide only above 52% concentration; not an EPCRA section 313 chemical.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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