TECHNICAL DATA SHEET

Hydrogen Peroxide 30% ACS Grade

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Hydrogen Peroxide 30% ACS Grade
CAS Number: 7722-84-1
Molecular Formula: H_2O_2
Molecular Weight: 34.015 g/mol
Grade: ACS Grade
Purity / Concentration: 30%
Synonyms: Hydrogen Peroxide Solution, Peroxide 30%

PRODUCT OVERVIEW

Hydrogen Peroxide 30% ACS Grade is a high-purity, clear, and colorless oxidizing agent essential for precision laboratory and industrial processes. With a verified assay of 30.2% and strictly controlled impurity levels, such as heavy metals at 0.05 ppm, this product ensures reliable and repeatable results in sensitive applications.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, making it ideal for laboratory work where high-quality, documented specifications are required for accurate analysis.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	30.2	29	32	Titration with KMnO4
Color (APHA)	APHA	5	—	10	APHA 2120 B
Specific Gravity (20°C)	g/mL	1.11	—	—	USP <841>
Residue After Ignition	%	0.0005	—	0.0020	ACS Reagent Chemicals
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-MS
Iron (Fe)	ppm	0.05	—	0.5	ICP-MS
Chloride (Cl^-)	ppm	0.1	—	5	ISE
Nitrate (NO_3^-)	ppm	0.2	—	5	Ion Chromatography
Phosphate (PO_4^{3-})	ppm	0.1	—	2	Spectrophotometry
Sulfate (SO_4^{2-})	ppm	0.2	—	10	Turbidimetry
Acidity	—	Passes Test	—	—	ACS Reagent Chemicals

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	**Odor**	Slightly sharp, pungent odor
Form	Liquid	**Boiling Point**	150°C (302°F)
Melting / Freezing Point	-0.41°C (31.3°F)	**Flash Point**	11°C (52°F)
Specific Gravity	1.11	**Solubility**	Soluble in water, miscible with many organic solvents
Molecular Formula	H_2O_2	**Molecular Weight**	34.015 g/mol
Vapor Pressure (20°C)	0.4 mmHg	**Viscosity (25°C)**	1.2 cP
Refractive Index (20°C)	1.406	**Density (25°C)**	1.11 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Serves as a high-purity reagent for complex assays where trace contaminants could interfere with reaction kinetics or detection limits.
2. **Textile Manufacturing** — Utilized as a potent bleaching agent to achieve precise whiteness levels in fabrics without introducing unwanted chemical residues.
3. **Water Treatment** — Applied as an advanced oxidation process to effectively neutralize organic contaminants and remove impurities from water supplies.
4. **Pulp and Paper** — Functions as an environmentally conscious bleaching agent that helps improve paper brightness while maintaining structural fiber integrity.
5. **Chemical Synthesis** — Acts as a strong oxidizing agent for various chemical reactions, providing controlled reactivity for complex molecule synthesis.

STORAGE & HANDLING

Proper storage is critical because hydrogen peroxide is a strong oxidizer that can cause fire or explosions if it comes into contact with incompatible materials. Keeping the container in a cool, well-ventilated area prevents pressure buildup and degradation, ensuring the stability of the 30% concentration.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid contact with organic materials and reducing agents.
- Handle with appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure adequate ventilation when handling to avoid inhalation of vapors.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger

Hazard Statements:

- H271: May cause fire or explosion; strong Oxidizer [Danger Oxidizing liquids; Oxidizing solids]
- H302: Harmful if swallowed [Warning Acute toxicity, oral]
- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
- H332: Harmful if inhaled [Warning Acute toxicity, inhalation]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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