TECHNICAL DATA SHEET

Hydrogen Peroxide 15% ACS Grade

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Hydrogen Peroxide 15% ACS Grade
CAS Number: 7722-84-1
Molecular Formula: H_2O_2
Molecular Weight: 34.015 g/mol
Grade: ACS Grade
Purity / Concentration: 15%
Synonyms: Hydrogen Peroxide Solution, H2O2 15%

PRODUCT OVERVIEW

Hydrogen Peroxide 15% ACS Grade is a high-purity, clear liquid oxidizing agent designed for precise laboratory and industrial applications. With a strictly controlled trace metal profile—including iron and heavy metals at 0.05 ppm—this solution ensures consistent performance in sensitive chemical reactions.

Grade Significance: ACS Grade signifies that this chemical meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for use in demanding laboratory and analytical work.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	15.1	14.5	16	Titration
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.058	—	—	USP <841>
Residue After Ignition	%	0.0005	—	0.0020	ACS
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-MS
Iron (Fe)	ppm	0.05	—	0.5	ICP-MS
Chloride (Cl^-)	ppm	0.1	—	1	ISE
Nitrate (NO_3^-)	ppm	0.2	—	2	Ion Chromatography
Phosphate (PO_4^{3-})	ppm	0.1	—	2	Spectrophotometry
Sulfate (SO_4^{2-})	ppm	0.2	—	5	Turbidimetry

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, clear liquid	**Odor**	Slightly sharp, pungent odor
Form	Liquid	**Boiling Point**	150°C (302°F)
Melting / Freezing Point	-0.43°C (31.2°F)	**Specific Gravity**	1.04
Solubility	Soluble in water	**Molecular Formula**	H_2O_2
Molecular Weight	34.015 g/mol	**Vapor Pressure (20°C)**	0.5 mmHg
Viscosity (25°C)	1.12 cP	**Refractive Index (20°C)**	1.406
Density (25°C)	1.11 g/mL		

APPLICATIONS

1. **Analytical Chemistry** — Used as a high-purity reagent in titrations and complex analytical procedures where low impurity levels are critical for accurate results.
2. **Textile and Paper** — Functions as a controlled bleaching agent to whiten fibers and pulp while maintaining material integrity.
3. **Environmental Services** — Employed in advanced wastewater treatment to effectively neutralize organic contaminants and remove odors through oxidation.
4. **Chemical Manufacturing** — Acts as a reliable oxidizing agent in various synthetic chemical reactions requiring a stable 15% concentration.

STORAGE & HANDLING

As a strong oxidizer, this product must be stored in a cool, ventilated area away from incompatible materials and direct sunlight to prevent decomposition. Improper storage can increase the risk of fire or pressure buildup, necessitating the use of vented containers to ensure safety.

- 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.
- Ensure proper ventilation in storage areas to minimize vapor accumulation.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

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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