

PRODUCT IDENTIFICATION



Product Name: Hydrogen Peroxide 25% Technical Grade

CAS Number: 7722-84-1

Molecular Formula: H_2O_2

Molecular Weight: 34.015 g/mol

Grade: Technical Grade

Purity / Concentration: 25%

Synonyms: H_2O_2 , Peroxide Solution

PRODUCT OVERVIEW

Hydrogen Peroxide 25% Technical Grade is a clear, colorless oxidizing agent characterized by high purity levels, featuring trace metallic contaminants like iron at a minimal 0.0005 ppm. This versatile solution is widely utilized across industrial sectors for chemical synthesis, bleaching, and water treatment applications.

Grade Significance: Technical Grade indicates that this product is formulated for industrial and manufacturing applications where consistent chemical performance is required, rather than for food or pharmaceutical use.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	25.29	24	26	Permanganate Titration
Residue On Evaporation	ppm	14	0	50	Evaporation
Aluminum Al	ppm	0.0125	0	0.0417	ICP-MS
Arsenic Antimony As As	ppm	0.0025	0	0.0083	ICP-MS
Calcium Ca	ppm	0.25	0	0.8333	ICP-MS
Iron	ppm	0.0005	0	0.0010	ICP
Lead Pb	ppm	0.0125	0	0.0417	ICP-MS
Magnesium Mg	ppm	0.025	0	0.0833	ICP-MS
Manganese	ppm	0.0030	0	0.0080	ICP
Nickel Ni	ppm	0.0125	0	0.0417	ICP-MS
Potassium K	ppm	0.25	0	0.8333	ICP-MS
Sodium Na	ppm	0.25	0	0.8333	ICP-MS
Zinc Zn	ppm	0.025	0	0.0833	ICP-MS
Chloride Cl	ppm	13	0	42	ICP
Phosphate PO_4	%	0.0125	0	0.0417	ICP
Sulfate SO_4	%	0.0075	0	0.025	ICP
Boron B	ppm	0.025	0	0.0833	ICP-MS
Silicon Si	ppm	0.025	0	0.0833	ICP-MS
Tin Sn	ppm	0.025	0	0.0833	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Slightly sharp, acrid odor
Form	Liquid	Boiling Point	Not characterized for the 25% solution
Melting / Freezing Point	Not characterized for the 25% solution	Specific Gravity	1.09
Solubility	Soluble in water	Molecular Formula	H ₂ O ₂
Molecular Weight	34.015 g/mol	Vapor Pressure (20°C)	0.5 mmHg
Viscosity (25°C)	1.2 cP	Refractive Index (20°C)	1.406
Density (25°C)	1.11 g/mL		

APPLICATIONS

- Textile Manufacturing** — Acts as a powerful bleaching agent to whiten fabrics and remove natural pigments before dyeing.
- Paper and Pulp** — Used to brighten wood pulp during the manufacturing process to produce high-quality white paper products.
- Water Treatment** — Functions as an effective oxidant to neutralize pollutants and remove organic contaminants from industrial wastewater.
- Chemical Synthesis** — Serves as a critical reagent in various organic and inorganic synthesis reactions requiring strong oxidation.
- Analytical Chemistry** — Utilized as a laboratory reagent for precise analytical testing and chemical assay development.

STORAGE & HANDLING

Proper storage is essential because Hydrogen Peroxide is a strong oxidizer that can intensify fires if it comes into contact with combustible materials. Containers must be kept in a cool, ventilated area to prevent pressure buildup and ensure the stability of the solution.

- 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 when handling to minimize inhalation risks.
- 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:

- H272: May intensify fire; oxidiser
- H302: Harmful if swallowed
- H314: Causes severe skin burns and eye damage
- H332: Harmful if inhaled
- H335: May cause respiratory irritation

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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