

PRODUCT IDENTIFICATION



Product Name: Hydrogen Peroxide 5% Technical Grade

CAS Number: 7722-84-1

Molecular Formula: H₂O₂

Molecular Weight: 34.015 g/mol

Grade: Technical Grade

Purity / Concentration: 5%

Synonyms: H₂O₂ 5%, Hydrogen Dioxide 5%

PRODUCT OVERVIEW

Hydrogen Peroxide 5% Technical Grade is a versatile, high-purity oxidizing agent ideal for industrial and laboratory applications. With a controlled assay of 5.1% and extremely low trace metal content, including heavy metals that are not detected, this liquid provides consistent performance for sensitive chemical processes.

Grade Significance: Technical Grade signifies that this product is manufactured to meet specific industrial standards for purity and performance, ensuring it is suitable for general chemical processing rather than food or pharmaceutical use.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	5.1	4.5	6	Titration with KMnO ₄
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.015	1.009	1.025	USP <841>
Residue After Ignition	%	0.0020	—	0.02	Gravimetric
Heavy Metals (as Pb)	ppm	ND	—	1	ICP-OES
Iron (Fe)	ppm	0.1	—	1	ICP-OES
Chloride (Cl ⁻)	ppm	0.2	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	0.5	—	10	Ion Chromatography
Acidity As H ₂ SO ₄	%	0.01	—	0.03	Titration
Phosphorus P	ppm	0.1	—	1	ICP-OES

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	150.2°C (302.4°F)
Melting / Freezing Point	-0.43°C (31.2°F)	Flash Point	not applicable
Specific Gravity	1.02	Solubility	Highly soluble in water
Molecular Formula	H ₂ O ₂	Molecular Weight	34.015 g/mol
Vapor Pressure (20°C)	23 mmHg	Viscosity (25°C)	1.2 cP
Refractive Index (20°C)	1.406	Density (25°C)	1.01 g/mL
Partition Coefficient (log P)	-0.9	Decomposition Temp.	Ex decomposes above 60°C in presence of catalysts; stability ~room temp

APPLICATIONS

- Water Treatment** — Used as an effective oxidizing agent to improve water quality by neutralizing contaminants and odors.
- Chemical Manufacturing** — Acts as a reliable precursor for the synthesis of various specialized chemicals and organic compounds.
- Textile Industry** — Utilized in bleaching and whitening processes to achieve desired fabric aesthetics while maintaining material integrity.
- Laboratory Research** — Serves as a standard reagent for a variety of analytical procedures and chemical reactions requiring precise concentrations.

STORAGE & HANDLING

Proper storage is critical because this product is a strong oxidizer that can pose fire or explosion risks if improperly handled. It must be kept in a cool, well-ventilated area away from incompatible materials to ensure chemical stability and prevent hazardous decomposition.

- 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:

- 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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