

PRODUCT IDENTIFICATION

**Product Name:** Hydrogen Peroxide 5% Technical Grade**CAS Number:** 7722-84-1**Molecular Formula:** H_2O_2 **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 clear, colorless oxidizing agent characterized by a 5.06% assay concentration. This stable solution is widely utilized across industrial sectors for its effective bleaching, sanitizing, and reactive properties.

Grade Significance: Technical Grade signifies that this product is manufactured for industrial and commercial use, balancing cost-effectiveness with the specific purity levels required for non-medical applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	5.06	4.5	5.5	Permanganate Titration
Residue On Evaporation	ppm	3	0	50	Evaporation
Aluminum Al	ppm	0.0025	0	0.0083	ICP-MS
Arsenic Antimony As As	ppm	0.0005	0	0.0017	ICP-MS
Calcium Ca	ppm	0.05	0	0.1667	ICP-MS
Iron	ppm	0.0005	0	0.0010	ICP
Lead Pb	ppm	0.0025	0	0.0083	ICP-MS
Magnesium Mg	ppm	0.0050	0	0.0167	ICP-MS
Manganese	ppm	0.0006	0	0.0020	ICP
Nickel Ni	ppm	0.0025	0	0.0083	ICP-MS
Potassium K	ppm	0.05	0	0.1667	ICP-MS
Sodium Na	ppm	0.05	0	0.1667	ICP-MS
Zinc Zn	ppm	0.0050	0	0.0167	ICP-MS
Chloride Cl	ppm	3	0	8	ICP
Phosphate Po ₄	ppm	25	0	83	ICP
Sulfate So ₄	ppm	15	0	50	ICP
Boron B	ppm	0.0050	0	0.0167	ICP-MS
Silicon Si	ppm	0.0050	0	0.0167	ICP-MS
Tin Sn	ppm	0.0050	0	0.0167	ICP-MS

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	Not characterized for the 5% solution
Melting / Freezing Point	Not characterized for the 5% solution	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

1. **Water Treatment** — Functions as a powerful oxidizing agent to break down contaminants and improve overall water quality.
2. **Chemical Manufacturing** — Acts as a reliable precursor for the synthesis of various chemical compounds and reagents.
3. **Textile Industry** — Used extensively for the efficient bleaching and whitening of fabrics during production.
4. **Laboratory Research** — Provides a consistent, controlled concentration for diverse chemical reactions and analytical testing procedures.

STORAGE & HANDLING

Proper storage is critical to maintain the stability of the solution and prevent degradation. Because the product can cause serious eye irritation, it must be stored in a cool, well-ventilated area away from incompatible materials to ensure workplace 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 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: **Warning**



Hazard Statements:

- H319: Causes serious eye 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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