

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: H_2O_2 5%, Hydrogen Dioxide 5%

PRODUCT OVERVIEW

Hydrogen Peroxide 5% Technical Grade is a versatile oxidizing agent provided as a clear, colorless liquid. With a precise assay of 5.06% and strictly controlled trace metal impurities, this solution is engineered for reliable performance in industrial and laboratory settings.

Grade Significance: Technical Grade indicates that this product is formulated for industrial and laboratory utility, providing a balance of cost-effectiveness and consistent chemical purity 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 improve water quality by neutralizing contaminants.
2. **Chemical Synthesis** — Serves as an essential precursor for the synthesis of various chemical compounds and reagents.
3. **Textile Manufacturing** — Utilized effectively for the bleaching and whitening of fabrics during production processes.
4. **Laboratory Research** — Used as a standard reagent for various chemical reactions and analytical testing procedures.

STORAGE & HANDLING

Proper storage is critical to maintain the chemical stability of hydrogen peroxide and prevent degradation. Because the product is classified as an eye irritant, it must be kept in a cool, well-ventilated area in its original container to ensure safety and prevent accidental exposure.

- 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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