

PRODUCT IDENTIFICATION



Product Name: Hydrogen Peroxide 3% Technical Grade

CAS Number: 7722-84-1

Molecular Formula: H_2O_2

Molecular Weight: 34.015 g/mol

Grade: Technical Grade

Purity / Concentration: 3%

Synonyms: H_2O_2 3%, Hydrogen Dioxide 3%

PRODUCT OVERVIEW

Hydrogen Peroxide 3% Technical Grade is a clear, colorless oxidizing agent featuring a precise 3.03% assay concentration. With exceptionally low trace metal impurities, such as iron at 0.0005 ppm, this solution is engineered for consistent performance in industrial and laboratory chemical processes.

Grade Significance: Technical Grade signifies that this product is manufactured for industrial and commercial utility where consistent chemical performance is required, rather than for pharmaceutical or food-grade applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	3.03	2.5	3.5	Permanganate Titration
Residue On Evaporation	ppm	2	0	50	Evaporation
Aluminum Al	ppm	0.0015	0	0.0050	ICP-MS
Arsenic Antimony As As	ppm	0.0003	0	0.0010	ICP-MS
Calcium Ca	ppm	0.03	0	0.1	ICP-MS
Iron	ppm	0.0005	0	0.0010	ICP
Lead Pb	ppm	0.0015	0	0.0050	ICP-MS
Magnesium Mg	ppm	0.0030	0	0.01	ICP-MS
Manganese	ppm	0.0003	0	0.0010	ICP
Nickel Ni	ppm	0.0015	0	0.0050	ICP-MS
Potassium K	ppm	0.03	0	0.1	ICP-MS
Sodium Na	ppm	0.03	0	0.1	ICP-MS
Zinc Zn	ppm	0.0030	0	0.01	ICP-MS
Chloride Cl	%	0.0001	0	0.0005	ICP
Phosphate Po_4	ppm	15	0	50	ICP
Sulfate So_4	ppm	9	0	30	ICP
Boron B	ppm	0.0030	0	0.01	ICP-MS
Silicon Si	ppm	0.0030	0	0.01	ICP-MS
Tin Sn	ppm	0.0030	0	0.01	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Slightly sharp, reminiscent of bleach
Form	Liquid	Boiling Point	Not characterized for the 3% solution
Melting / Freezing Point	Not characterized for the 3% solution	Specific Gravity	1.01
Solubility	Miscible with water	Molecular Formula	H ₂ O ₂
Molecular Weight	34.015 g/mol	Vapor Pressure (20°C)	0.23 mmHg
Viscosity (25°C)	1.0 cP	Refractive Index (20°C)	1.333
Density (25°C)	1.01 g/mL		

APPLICATIONS

- 1. Water Treatment** — Utilized as an effective oxidant to enhance dissolved oxygen levels and assist in the remediation of contaminants within water systems.
- 2. Textile Manufacturing** — Applied as a reliable bleaching agent to achieve desired brightness and color uniformity in various fabric and textile products.
- 3. Pulp and Paper** — Used in the whitening process of paper pulp to ensure high-quality, bright finishes for final paper goods.
- 4. Laboratory Research** — Serves as a standard reagent for various analytical procedures and chemical synthesis reactions requiring a controlled oxidizing environment.

STORAGE & HANDLING

Proper storage is critical to maintain the chemical stability of the peroxide and prevent decomposition. Because the product is classified as a danger for skin and eye irritation, it must be stored in a cool, ventilated area to mitigate pressure buildup 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 strong acids.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Use appropriate personal protective equipment (PPE) such as 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:

- H315: Causes skin irritation
- H318: Causes serious eye damage

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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