

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 versatile oxidizing agent characterized by its high purity, featuring a 3.1% assay and minimal trace impurities like iron at 0.05 ppm. This clear, colorless liquid is widely utilized in industrial and laboratory settings for its effective oxidation and bleaching capabilities.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial utility, ensuring reliable performance for non-medical applications where cost-effectiveness and consistency are paramount.

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** — It is applied to enhance dissolved oxygen levels in water systems, supporting efficient aerobic processes.
- 2. Textile Manufacturing** — This product acts as a reliable bleaching agent to achieve desired brightness and color consistency in fabric production.
- 3. Pulp and Paper** — Used during the bleaching phase, it helps improve paper whiteness while maintaining structural integrity.
- 4. Laboratory Research** — It serves as a standard reagent for analytical procedures requiring a consistent and stable oxidizing environment.
- 5. Chemical Synthesis** — The solution functions as a controlled oxidant in various industrial chemical reactions where precise concentration is required.

STORAGE & HANDLING

Proper storage is critical to prevent decomposition, as hydrogen peroxide is sensitive to light and heat. It must be kept in its original, vented container in a cool, well-ventilated area to prevent pressure buildup and maintain its chemical stability.

- 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:

- 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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