TECHNICAL DATA SHEET

Hydrogen Peroxide 5% Technical Grade

Revised: 07/22/2026

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 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 (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 Po4	ppm	25	0	83	ICP
Sulfate So4	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_2O_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** — Used as an effective oxidizing agent to improve water quality by neutralizing contaminants and odors.
2. **Chemical Manufacturing** — Acts as a reliable precursor for the synthesis of various specialized chemicals and organic compounds.
3. **Textile Industry** — Utilized in bleaching and whitening processes to achieve desired fabric aesthetics while maintaining material integrity.
4. **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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