

PRODUCT IDENTIFICATION



Product Name: Hydrogen Peroxide 10% Technical Grade

CAS Number: 7722-84-1

Molecular Formula: H_2O_2

Molecular Weight: 34.015 g/mol

Grade: Technical Grade

Purity / Concentration: 10%

Synonyms: H₂O₂ 10%, Hydrogen Dioxide 10%

PRODUCT OVERVIEW

Hydrogen Peroxide 10% Technical Grade is a versatile oxidizing agent characterized by a precise 10.11% assay and low trace metal content, such as iron at 0.0005 ppm. This clear, colorless liquid is essential for industrial oxidation reactions and various chemical processing applications requiring reliable concentration levels.

Grade Significance: Technical Grade indicates that this product is formulated for industrial and manufacturing utility where high consistency is required, though it is not intended for pharmaceutical or food-grade applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	10.11	9.5	10.5	Permanganate Titration
Residue On Evaporation	ppm	6	0	50	Evaporation
Aluminum Al	ppm	0.0050	0	0.0167	ICP-MS
Arsenic Antimony As As	ppm	0.0010	0	0.0033	ICP-MS
Calcium Ca	ppm	0.1	0	0.3333	ICP-MS
Iron	ppm	0.0005	0	0.0010	ICP
Lead Pb	ppm	0.0050	0	0.0167	ICP-MS
Magnesium Mg	ppm	0.01	0	0.0333	ICP-MS
Manganese	ppm	0.0010	0	0.0030	ICP
Nickel Ni	ppm	0.0050	0	0.0167	ICP-MS
Potassium K	ppm	0.1	0	0.3333	ICP-MS
Sodium Na	ppm	0.1	0	0.3333	ICP-MS
Zinc Zn	ppm	0.01	0	0.0333	ICP-MS
Chloride Cl	ppm	5	0	17	ICP
Phosphate Po ₄	%	0.0050	0	0.0167	ICP
Sulfate So ₄	%	0.0030	0	0.01	ICP
Boron B	ppm	0.01	0	0.0333	ICP-MS
Silicon Si	ppm	0.01	0	0.0333	ICP-MS
Tin Sn	ppm	0.01	0	0.0333	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 10% solution
Melting / Freezing Point	Not characterized for the 10% solution	Specific Gravity	1.035
Solubility	Soluble in water	Molecular Formula	H ₂ O ₂
Molecular Weight	34.015 g/mol	Vapor Pressure (20°C)	0.23 mmHg
Viscosity (25°C)	1.12 cP	Refractive Index (20°C)	1.406
Density (25°C)	1.01 g/mL	Partition Coefficient (log P)	-0.3 to -0.1
Decomposition Temp.	Decomposes slowly at elevated temperatures; stable at room temperature		

APPLICATIONS

1. **Textile Manufacturing** — Used as an effective bleaching agent to whiten fabrics and prepare fibers for dyeing processes.
2. **Water Treatment** — Employed to oxidize and remove organic contaminants and odors from process water streams.
3. **Analytical Chemistry** — Serves as a high-purity reagent for laboratory testing and chemical analysis protocols.
4. **Chemical Synthesis** — Acts as a foundational oxidizing component in complex industrial chemical manufacturing processes.

STORAGE & HANDLING

Proper storage is critical because this product is a strong oxidizer that can intensify fires if exposed to combustible materials. It must be kept in its original, vented container in a cool, well-ventilated area to prevent pressure buildup and maintain 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 reducing agents.
- Ensure proper ventilation when handling to avoid inhalation of vapors.
- 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:

- H272: May intensify fire; oxidiser
- H302: Harmful if swallowed
- 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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