

### PRODUCT IDENTIFICATION



**Product Name:** Hydrogen Peroxide 6% Technical Grade

**CAS Number:** 7722-84-1

**Molecular Formula:** H<sub>2</sub>O<sub>2</sub>

**Molecular Weight:** 34.015 g/mol

**Grade:** Technical Grade

**Purity / Concentration:** 6%

**Synonyms:** Hydrogen Dioxide, Peroxide Solution

### PRODUCT OVERVIEW

Hydrogen Peroxide 6% Technical Grade is a versatile oxidizing agent characterized by its high purity and low contaminant profile, including an assay of 6.1%. This transparent liquid is essential for industrial chemical processes requiring precise oxidative control and reliable performance.

**Grade Significance:** Technical Grade indicates that this product is formulated for industrial and manufacturing applications where consistent quality and chemical reliability are required, rather than for medicinal or food-grade uses.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	6.1	5.8	6.4	Titration with Potassium Permanganate
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.022	1.019	1.025	Hydrometer
Residue After Ignition	%	0.0020	—	0.01	Gravimetric
Iron (Fe)	ppm	0.1	—	1	ICP-OES
Chloride (Cl <sup>-</sup> )	ppm	0.2	—	2	Ion Chromatography
Nitrate (NO <sub>3</sub> <sup>-</sup> )	ppm	0.2	—	2	Ion Chromatography
Phosphate (PO <sub>4</sub> <sup>3-</sup> )	ppm	0.1	—	1	Spectrophotometry
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	0.5	—	5	Ion Chromatography
Acidity As H <sub>2</sub> SO <sub>4</sub>	ppm	15	—	50	Titration with NaOH

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

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Transparent, pale blue liquid	<b>Odor</b>	Slightly sharp, pungent odor
<b>Form</b>	Liquid	<b>Boiling Point</b>	150°C (302°F)
<b>Melting / Freezing Point</b>	-0.43°C (31.2°F)	<b>Specific Gravity</b>	1.025
<b>Solubility</b>	Fully miscible with water	<b>Molecular Formula</b>	H <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight</b>	34.015 g/mol	<b>Vapor Pressure (20°C)</b>	0.23 mmHg
<b>Viscosity (25°C)</b>	1.12 cP	<b>Refractive Index (20°C)</b>	1.406
<b>Density (25°C)</b>	1.010 g/mL		

## APPLICATIONS

1. **Water Treatment** — Utilized as a potent oxidizing agent to effectively remove organic contaminants and odors from process water streams.
2. **Textile Manufacturing** — Serves as an efficient bleaching agent to brighten fabrics and prepare fibers for uniform dyeing processes.
3. **Pulp and Paper** — Applied in the bleaching stages of paper production to achieve desired whiteness levels while maintaining fiber integrity.
4. **Analytical Chemistry** — Functions as a high-purity reagent in laboratory settings for various oxidative titration and synthesis experiments.
5. **Chemical Synthesis** — Acts as a key reactant in industrial chemical reactions where controlled oxidation is required to produce secondary compounds.

## STORAGE & HANDLING

Proper storage is critical because hydrogen peroxide is a strong oxidizer that can pose fire or explosion risks if it contacts incompatible materials. It must be kept in vented containers away from heat sources and organic contaminants to maintain its stability and prevent pressure buildup.

- 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 in storage areas.
- Use personal protective equipment (PPE) such as gloves and goggles when handling.

## 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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Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | [www.alliancechemical.com](http://www.alliancechemical.com)

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