

### PRODUCT IDENTIFICATION



**Product Name:** Hydrogen Peroxide 10% ACS Grade

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

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

**Molecular Weight:** 34.015 g/mol

**Grade:** ACS Grade

**Purity / Concentration:** 10%

**Synonyms:** Hydrogen Dioxide, Peroxide Solution

### PRODUCT OVERVIEW

Hydrogen Peroxide 10% ACS Grade is a high-purity, clear, colorless liquid designed for demanding laboratory and industrial applications. Featuring a precise 10.1% assay and exceptionally low trace metal levels like Iron at 0.05 ppm, this solution serves as a reliable and powerful oxidizing agent.

**Grade Significance:** ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for high-precision analytical work.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	10.1	9	11	Titration
Color (APHA)	APHA	5	—	10	ASTM D1209
Residue After Ignition	%	0.0005	—	0.0020	Gravimetric
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-MS
Iron (Fe)	ppm	0.05	—	0.5	ICP-MS
Chloride (Cl <sup>-</sup> )	ppm	0.1	—	0.5	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	—	2	Spectrophotometry
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	0.2	—	5	Ion Chromatography

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

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Clear, colorless liquid	<b>Odor</b>	Slightly sharp, characteristic 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>	1.03
<b>Solubility</b>	Completely soluble in 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>	6.3 mmHg
<b>Viscosity (25°C)</b>	1.12 cP	<b>Refractive Index (20°C)</b>	1.406
<b>Density (25°C)</b>	1.01 g/mL	<b>Decomposition Temp.</b>	not applicable

## APPLICATIONS

1. **Analytical Chemistry** — Used as a reagent for precise titrations and complex chemical assays where purity is critical for accurate results.
2. **Water Treatment** — Applied to enhance water quality by oxidizing contaminants and removing organic pollutants through controlled chemical reactions.
3. **Textile Manufacturing** — Utilized as a high-performance bleaching agent to whiten fabrics without compromising fiber integrity.
4. **Chemical Synthesis** — Serves as a fundamental oxidizing agent in various synthetic processes requiring consistent, high-grade chemical inputs.

## STORAGE & HANDLING

As a strong oxidizer, Hydrogen Peroxide must be stored in a cool, ventilated area away from combustible materials to prevent fire or explosion risks. Proper containment is essential to prevent severe skin burns and eye damage, as well as to maintain the chemical stability of the solution over time.

- Store in a cool, dry place away from direct sunlight and heat sources.
- Use containers made of HDPE or glass to prevent reactions with metals.
- Avoid contact with organic materials and reducing agents to prevent hazardous reactions.
- 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.*

---

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

**Disclaimer:** The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.