

PRODUCT IDENTIFICATION



Product Name: Sulfuric Acid 30%

CAS Number: 7664-93-9

Molecular Formula: $\text{H}_2\text{O}_4\text{S}$

Molecular Weight: 98.08 g/mol

Grade: Technical Grade

Purity / Concentration: 30%

Synonyms: Dilute Sulfuric Acid, Sulfuric Acid Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-quality Technical Grade 30% Sulfuric Acid, a reliable solution characterized by a specific gravity of 1.219 g/mL and low impurity levels. This versatile liquid is essential for industrial processes requiring precise pH control and chemical reactivity.

Grade Significance: Technical Grade indicates that this product is manufactured to meet industrial standards where high performance and consistency are required, though it is not intended for food, drug, or medical applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	30	29	31	Titration
Color (APHA/Hazen)	APHA	5	0	10	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.219	1.217	1.221	Hydrometer @ 25°C
Non-Volatile Residue	%	0.0030	—	0.01	Residue on Ignition
Arsenic Antimony As As	ppm	0.0009	—	0.0030	ICP-MS
Heavy Metals As Pb	ppm	0.15	0	0.5	ICP-MS (as Pb)
Iron (Fe)	ppm	0.018	0	0.06	ICP-MS
Chloride Cl	ppm	0.018	0	0.06	ICP
Nitrate No3	ppm	0.048	0	0.16	ICP
Mercury Hg	ppm	0.468	—	1.56	ICP-MS
Sulfite So3	ppm	2	0	3	ICP
Turbidity	NTU	0.3	0	1	EPA 180.1

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Transparent, pale liquid	Odor	Odorless
Form	Liquid solution	Boiling Point	Not characterized for the 30% solution
Melting / Freezing Point	Not characterized for the 30% solution	Flash Point	Non-flammable
Specific Gravity	1.22	Solubility	Fully miscible with water, polar organic solvents
Molecular Formula	H ₂ O ₄ S	Molecular Weight	98.08 g/mol
Vapor Pressure (20°C)	0.3 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.400	Density (25°C)	1.06 g/mL

APPLICATIONS

- 1. Water Treatment** — This product is used to effectively lower pH levels in water treatment systems, ensuring that effluent meets strict environmental discharge regulations.
- 2. Chemical Manufacturing** — It serves as a critical reactant in the synthesis of various industrial chemicals, including the production of fertilizers and specialized explosive compounds.
- 3. Laboratory Research** — The acid is utilized in laboratory settings for dehydration reactions, leveraging its strong affinity for water to drive chemical processes.
- 4. Energy Storage** — It functions as a vital electrolyte in lead-acid batteries, facilitating the essential electrochemical reactions required for efficient energy storage.

STORAGE & HANDLING

Proper storage is critical because 30% Sulfuric Acid is highly corrosive to metals and poses severe risks for skin burns and eye damage. Containers must be kept in a cool, well-ventilated area, away from incompatible substances, to prevent hazardous reactions and ensure the integrity of the chemical.

- Store in a cool, dry, well-ventilated area away from incompatible substances.
- Use materials compatible with sulfuric acid, such as HDPE or glass containers.
- Avoid contact with strong bases and organic materials to prevent violent reactions.
- Ensure proper personal protective equipment (PPE) is worn, including gloves and eye protection.
- Keep containers tightly closed when not in use to prevent moisture absorption.

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:

- H290: May be corrosive to metals
- H314: Causes severe skin burns and eye damage
- H350: May cause cancer

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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