

PRODUCT IDENTIFICATION



Product Name: Sulfuric Acid 37% - Battery Acid

CAS Number: 7664-93-9

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

Molecular Weight: 98.08 g/mol

Grade: Technical

Purity / Concentration: 37%

Synonyms: Battery Acid, Sulfuric Acid Solution

PRODUCT OVERVIEW

Sulfuric Acid 37% is a highly corrosive strong acid, primarily used in lead-acid batteries. It is a colorless, odorless liquid that serves as an essential electrolyte in various industrial applications, providing excellent conductivity and chemical reactivity.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	37	36	38	Titration
Color (APHA/Hazen)	APHA	5	0	10	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.3302	1.273	1.3967	Hydrometer @ 25°C
Non-Volatile Residue	%	0.0030	—	0.01	Residue on Ignition
Arsenic Antimony As As	ppm	0.0012	—	0.0040	ICP-MS
Heavy Metals As Pb	ppm	0.15	0	0.5	ICP-MS (as Pb)
Iron (Fe)	ppm	0.024	0	0.08	ICP-MS
Chloride Cl	ppm	0.024	0	0.08	ICP
Nitrate No3	ppm	0.057	0	0.19	ICP
Mercury Hg	ppm	0.579	—	1.93	ICP-MS
Sulfite So3	ppm	2	0	3.5	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	Clear, colorless liquid	Odor	Odorless
Form	Liquid	Boiling Point	Not characterized for the 37% solution
Melting / Freezing Point	Not characterized for the 37% solution	Flash Point	Non-flammable
Specific Gravity	1.28	Solubility	Fully miscible with water, many organic solvents
Molecular Formula	$\text{H}_2\text{O}_4\text{S}$	Molecular Weight	98.08 g/mol
Vapor Pressure (20°C)	0.3 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.406	Density (25°C)	1.2 g/mL

APPLICATIONS

1. **Automotive** — Used as the primary electrolyte in lead-acid batteries for energy storage and supply.
2. **Industrial Chemistry** — Serves as a reactant in the production of various chemicals, including fertilizers and explosives.
3. **Water Treatment** — Utilized to adjust the pH levels in wastewater treatment processes.
4. **Manufacturing** — Employed in the pickling process to clean metal surfaces before further processing.
5. **Chemical Manufacturing** — Acts as a catalyst in various chemical reactions, enhancing reaction rates.

STORAGE & HANDLING

- Store in a cool, dry, well-ventilated area away from incompatible materials.
- Use corrosion-resistant containers (e.g., HDPE, glass) for storage.
- Avoid contact with strong bases, organic materials, and reducing agents.
- Ensure proper PPE is worn, including gloves and eye protection, when handling.
- Use in a fume hood or well-ventilated area to minimize inhalation exposure.

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:

- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

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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