TECHNICAL DATA SHEET

Sulfuric Acid 70%

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Sulfuric Acid 70%
CAS Number: 7664-93-9
Molecular Formula: H_2O_4S
Molecular Weight: 98.08 g/mol
Grade: Technical
Purity / Concentration: 70%
Synonyms: Sulfuric Acid Solution, Oil of Vitriol

PRODUCT OVERVIEW

Alliance Chemical offers high-quality Technical grade Sulfuric Acid 70%, a clear, viscous liquid essential for industrial chemical processes. With a precise assay of 70.3% and low impurity levels, such as 1 ppm of Iron, this product provides the consistency required for reliable performance in demanding applications.

Grade Significance: Technical grade indicates that this product is manufactured for industrial use where cost-effective performance and consistent chemical composition are prioritized over laboratory-grade purity.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	70.3	69	71	Titration with NaOH
Color (APHA)	APHA	10	—	20	ASTM D1209
Specific Gravity (20°C)	g/mL	1.61	1.605	1.615	ASTM D4052
Residue After Ignition	%	0.0020	—	0.0050	Gravimetric
Heavy Metals (as Pb)	ppm	0.5	—	2	ICP-OES
Iron (Fe)	ppm	1	—	5	ICP-OES
Chloride (Cl^-)	ppm	0.2	—	1	Ion Chromatography

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear viscous liquid	**Odor**	Odorless
Form	Liquid	**Boiling Point**	337°C (639°F)
Melting / Freezing Point	10°C (50°F)	**Flash Point**	Not applicable
Specific Gravity	1.607	**Solubility**	Complete water miscibility, strong acid interaction
Molecular Formula	H_2O_4S	**Molecular Weight**	98.08 g/mol
Vapor Pressure (20°C)	0.3 mmHg	**Viscosity (25°C)**	20.1 cP
Refractive Index (20°C)	1.405	**Density (25°C)**	1.184 g/mL

APPLICATIONS

1. **Energy Storage** — This sulfuric acid acts as a primary electrolyte in lead-acid batteries, facilitating the chemical reactions necessary for power storage.
2. **Chemical Manufacturing** — It serves as a critical reagent in the synthesis of various industrial chemicals, including the production of fertilizers and specialized explosives.
3. **Water Treatment** — Used extensively for pH adjustment, this acid helps neutralize alkaline wastewater streams to meet environmental compliance standards.
4. **Organic Synthesis** — It functions as a powerful catalyst in organic reactions, significantly increasing reaction rates and improving overall yields.

STORAGE & HANDLING

Proper storage is vital because Sulfuric Acid 70% is highly corrosive and causes severe skin burns and eye damage. It must be stored in specialized, compatible containers in a cool, ventilated area to prevent hazardous reactions and ensure the integrity of the chemical remains stable.

- 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 personal protective equipment (PPE) is worn, including gloves and goggles.
- Use in a fume hood or well-ventilated area to minimize inhalation risks.

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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