



ELRASA - SLA™ (Sulphuric Acid)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	Clear, colorless, viscous, oily liquid.
Physical Form	Clear, colorless, viscous, oily liquid.
Odor	Odorless
Molecular Weight	98.08 g/mol
Molecular Formula	H ₂ SO ₄
Density	1.8302 g/cm ³
Specific Gravity	~1.84 g/cm ³ at 20°C
Viscosity	26.7 cP (20 °C)
pH (aqueous solution)	<0.1 (93% Solution); 0.3 (5% or 1N Solution)
Assay / Purity	min 98.50%
Chemical Properties	
pKa	pKa1 = -10, pKa2 = 2.0
Ionic Nature	Strong mineral acid; diprotic
Incompatibilities	Reactive with water, bases, organic materials, combustible materials, reducing agents, and many metals.
Hazardous Reactions	Reacts violently with water, generating significant heat. Contact with most metals may evolve flammable hydrogen gas.
Hazardous Decomposition Products	Upon heating to decomposition, may produce toxic fumes of sulfur oxides (SO ₂ , SO ₃).
Thermal Properties	
Melting Point	-64°C
Boiling Point	337°C
Flash Point	Not flammable
Autoignition Temperature	Not flammable
Decomposition Temperature	340°C
Thermal Stability	Stable under normal temperatures and pressures.



Property	Specification
Solubility	
Solubility in Water	Miscible in all proportions (highly exothermic reaction)
Solubility in Ethanol	Miscible in all proportions

2. Processing Methods

Acidic Drain Cleaner

A high-density formulation designed to sink through standing water and react with organic blockages like grease, hair, and food particles. The high concentration of sulphuric acid rapidly degrades these materials. Processing requires extreme caution, including slow mixing in a corrosion-resistant vessel with adequate ventilation.

Key Ingredients	Indicative Dosage (% w/w)
Sulphuric Acid (93-98%)	93.0 - 98.0%
Corrosion Inhibitors	0.5 - 2.0%
Water	Balance to 100%

Lead-Acid Battery Electrolyte (Standard Automotive)

The electrolyte is a critical component in lead-acid batteries, facilitating the flow of ions between the lead plates. The specific gravity is a key parameter for a fully charged battery. Formulation involves the careful and slow dilution of concentrated sulphuric acid into deionized water under cooling to manage the strong exothermic reaction.

Key Ingredients	Indicative Dosage (% w/w)
Sulphuric Acid	~37%
Deionized Water	~63%

3. Dosing by Application

Application	Recommended / Max Dosage
Water Treatment (pH Adjustment)	1 - 30 mg/L (for coagulation)
Battery Electrolyte	29 - 50% concentration by weight
Metal Pickling	Varies (e.g., 50% concentration)
Chemical Synthesis	Varies (Stoichiometric or Catalytic)

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.



EXPLORE ELCHEMY'S PRODUCT PORTFOLIO

[ELRASA - SLA™ \(Sulphuric Acid\)](#) | [Browse Catalog](#) | [Connect with us](#)