ALLIANCE CHEMICAL

Safety Data Sheet

Sulfuric Acid ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sulfuric Acid ACS

Synonyms/Generic Names: Battery Acid, Dihydrogen Sulfate, Oil of Vitriol

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Alliance Chemical
204 S. Edmond St.
Taylor, Texas 76574

For More Information Call: 512-365-6838

In Case of Emergency Call: CHEMTEL (800) 255-3924

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Corrosive

Target Organs: Teeth, Lungs

Signal Words: Danger

Pictograms:

GHS Classification:

Skin corrosion	Category 1A
Serious eye damage	Category 1
Acute aquatic toxicity	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.

Precautionary Statements:

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

Potential Health Effects

Eyes	Causes severe eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	2
Specific hazard	W

HMIS Ratings

Health	3
Fire	0
Reactivity	2
Personal	J

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Sulfuric Acid	95-98	7664-93-9	231-939-5	H_2SO_4	98.08 g/mol
Water	Balance	7732-18-5	231-791-2	H_2O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (sulfur oxides, hydrogen sulfide gas) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Prevent spillage from entering drains. Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Sulfuric Acid	0.2 mg/m^3	TLV	ACGIH
	1 mg/m^3	PEL	OSHA
	1 mg/m^3	REL	NIOSH
	15 mg/m^3	IDLH	OSHA

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles, and face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and full body suit.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid.
Odor	Odorless.
Odor threshold	Not Available
pH	~1
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	Not Available
Solubility (ies)	Soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Moisture.
Incompatible Materials	Bases, halides, organic material, carbides, chlorates, fulminates, nitrates, picrates, cyanides, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorus (III) oxide, powdered metals.
Hazardous Decomposition Products	Sulfur oxides, hydrogen sulfide gas.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	LD50 – Rat – 510 mg/m^3 – 2h
Ingestion	LD50 – Rat – 2,140 mg/kg

Carcinogenicity

IARC	1: Carcinogenic to humans (Sulfuric Acid).
ACGIH	A2: Suspected human carcinogen (Sulfuric Acid).
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Burning, itching, redness, inflammation upon exposed tissue.
Eyes	Eye burns, watering eyes.
Respiratory	Burning, choking, coughing, shortness of breath.
Ingestion	Nausea, vomiting, diarrhea, burning, severe pain.

Chronic Toxicity	May cause bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis, yellowing of teeth and erosion of tooth enamel.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 – Gambusia affinis – 42 mg/L – 96h
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Does not accumulate.
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1830, Sulfuric acid, 8, pg II
TDG	UN1830, SULFURIC ACID, 8, pg II
IMDG	UN1830, SULFURIC ACID, 8, pg II
Marine Pollutant	No
IATA/ICAO	UN1830, Sulfuric acid, 8, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Sulfuric Acid
SARA 302	Listed: Sulfuric Acid
SARA 304	Listed: Sulfuric Acid
SARA 311	Sulfuric Acid
SARA 312	Sulfuric Acid
SARA 313	Listed: Sulfuric Acid (aerosol)
WHMIS Canada	Class E: Corrosive material. Class D-1A: Material causing other toxic effects (VERY TOXIC).

16. OTHER INFORMATION