



## Material Safety Data Sheet

Provided by:  
The Dumont Company, Inc.  
381 S. Central Ave., Oviedo, FL. 32765  
Phone (800) 330-1369/Fax (800) 524-9315

### Sulfuric Acid 38%

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#### 1. Product Identification

MSDS Name: **Sulfuric acid**, reagent acs

**Synonyms: Hydrogen Sulfate, Oil of Vitriol, Vitriol Brown Oil, Matting Acid, Battery Acid**

Company Identification: Acros Organics N.V.

One Reagent Lane

Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

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#### 2. Composition/Information on Ingredients

CAS#	Chemical Name	%	EINECS#
7664-93-9	Sulfuric acid	38%	231-639-5
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: XI C

Risk Phrases: 35 36/38

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#### 3. Hazards Identification

## EMERGENCY OVERVIEW

Appearance: colorless to brown.

**Danger! Harmful if inhaled. Corrosive.** Hygroscopic. Causes digestive and respiratory tract burns. Causes digestive and respiratory tract irritation. Causes severe eye and skin irritation and burns. Target Organs: None known.

### Potential Health Effects

#### Eye:

May cause irreversible eye injury. Causes eye irritation and burns.

#### Skin:

Causes severe skin irritation and burns.

#### Ingestion:

Causes gastrointestinal tract burns.

#### Inhalation:

Harmful if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract.

#### Chronic:

Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis.

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## 4. First Aid Measures

#### Eyes:

Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation is required (at least 30 minutes).

#### Skin:

Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. **SPEEDY ACTION IS CRITICAL!**

#### Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

#### Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen.

#### Notes to Physician:

Treat symptomatically and supportively. -

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## 5. Fire Fighting Measures

General Information:

Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Contact with water can cause violent liberation of heat and splattering of the material.

Extinguishing Media:

Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Use carbon dioxide or dry chemical.

Autoignition Temperature: Not available.

Flash Point: 340 deg C ( 644.00 deg F)

NFPA Rating: Not published.

Explosion Limits, Lower: Not available.

Upper: Not available.

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## 6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Cover with sand, dry lime or soda ash and place in a closed container for disposal.

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## 7. Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Do not allow contact with water. Discard contaminated shoes.

Storage:

Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area.

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## 8. Exposure Controls/Personal Protection

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
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Sulfuric acid	1 mg/m <sup>3</sup> ; 3 mg/m <sup>3</sup> STEL	1 mg/m <sup>3</sup> TWA; 15 mg/m <sup>3</sup> IDLH	1 mg/m <sup>3</sup> TWA
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OSHA Vacated PELs:

Sulfuric acid:1 mg/m<sup>3</sup> TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## 9. Physical and Chemical Properties ()

Appearance:	colorless to brown liquid
Odor:	Odorless
Solubility:	
Density:	1.8400 g/cm <sup>3</sup>
pH:	Not available
% Volatiles by volume @ 21C (70F):	
Boiling Point:	280 deg C @ 760.00mm Hg
Melting Point:	3 deg C
Vapor Density (Air=1):	1.2 kg/m <sup>3</sup>
Vapor Pressure (mm Hg):	< 0.00120 mm Hg
Evaporation Rate:	Slower than ether
Viscosity:	Not available

Molecular Formula: H<sub>2</sub>O<sub>4</sub>S

Molecular Weight: 98.08

## 10. Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Contact with water, metals, excess heat, combustible materials, organic materials.

Incompatibilities with Other Materials:

Acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), alcohols and glycols (e.g. butyl alcohol, ethanol, methanol, ethylene glycol), aldehydes (e.g. acetaldehyde, acrolein, chloral hydrate, formaldehyde), amines (aliphatic and aromatic, e.g. dimethyl amine, propylamine, pyridine, triethylamine), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), cyanides (e.g. potassium cyanide, sodium cyanide), dithiocarbamates (e.g. ferbam, maneb, metham, thiram), fluorides (inorganic, e.g. ammonium fluoride, calcium fluoride, cesium fluoride), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), metals as powders (e.g. hafnium, rhenium, nickel), metals and metal compounds (toxic, e.g. beryllium, lead acetate, nickel carbonyl, tetraethyl lead), nitrides (e.g. potassium nitride, sodium nitride).

Hazardous Decomposition Products:

Oxides of sulfur.

Hazardous Polymerization: Has not been reported.

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## **11. Toxicological Information**

RTECS#:

CAS# 7664-93-9: WS5600000

LD50/LC50:

CAS# 7664-93-9: Inhalation, mouse: LC50 = 320 mg/m<sup>3</sup>/2H; Inhalation, rat: LC50 = 510 mg/m<sup>3</sup>/2H; Oral, rat: LD50 = 2140 mg/kg.

Carcinogenicity:

Sulfuric acid -

ACGIH: A2 - Suspected Human Carcinogen

OSHA: Select carcinogen

IARC: Group 1 carcinogen

Epidemiology:

Workers exposed to industrial sulfuric acid mist showed a statistical increase in laryngeal cancer. This data suggests a possible relationship between carcinogenesis and inhalation of sulfuric acid mist.

Teratogenicity:

No data available.

Reproductive Effects:

No data available.

Neurotoxicity:

No data available.

Mutagenicity:

No data available.

Other Studies:

No data available.

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## **12. Ecological Information**

Ecotoxicity:

Sulfuric acid is harmful to aquatic life in very low concentrations. It may be dangerous if it enters water intakes. The aquatic toxicity for bluegill in fresh water was 24.5 ppm/24 hr, which was lethal.

Environmental Fate:

Not available.

Physical/Chemical:

Not available.

Other:

Not available.

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## **13. Disposal Considerations**

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.