



# SAFETY DATA SHEET

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Sulfuric Acid Solution 1.0 N  
PRODUCT NUMBER: S804  
COMPANY INFO: *PhytoTechnology Laboratories®*  
PO Box 12205, Shawnee, KS 66282-2205  
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442  
www.phytotechlab.com

EMERGENCY PHONE NUMBER: 1-800-535-5053 - US Only  
1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *PhytoTechnology Laboratories®* are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification:

H290 - Corrosive to metals (Category 1)  
H314 - Skin corrosion (Category 1A)  
H318 - Serious eye damage (Category 1), H318

GHS Label elements, including hazard and precautionary statements:

Pictogram:



Signal Word: **Danger**

Hazard Statements:

H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H318 - Causes serious eye damage.

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. Continue rinsing.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.: 7664-93-9  
Formula:  $\text{H}_2\text{SO}_4$   
Molecular Weight: 98.07 g/mol  
EC No.: 231-639-5

Ingredient	CAS Number	Percent	Hazardous
Sulfuric Acid	7664-93-9	~9 %	OSHA PEL: 1 mg/m <sup>3</sup> ; ACGIH TLV: 1 mg/m <sup>3</sup>
Water	7732-18-5	>90 %	No exposure limits established by OSHA or ACGIH

## 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b>
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

## 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Protective Equipment and Precaution for Firefighters:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.
Hazardous Combustion Products:	May emit toxic fumes under fire conditions. Reacts with metals releasing hydrogen.
Toxic Gases Produced:	Sulfur oxides, hydrogen gas

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Method of Containment and Cleanup:	Using caution and the proper protective equipment contain the spilled material and do not let the product enter drains. Contact a licensed professional waste disposal service to dispose of this material.

## 7. HANDLING AND STORAGE

Precaution for Safe Handling:	Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Wash thoroughly after use.
Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area.
Incompatibilities:	Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, e.g. potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with:, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals
Recommended Storage Temperature:	Room Temperature

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Occupational Exposure Limits: Sulfuric acid (7664-93-9) – TWA value: 1 mg/m<sup>3</sup>

ACGIH Threshold Limit Values (TLVs): Sulfuric acid (7664-93-9) – TWA value: 0.2 mg/m<sup>3</sup>

Engineering Controls: Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection: Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.

Skin Protection: Protective gloves

Body Protection: Lab coat

Respiratory Protection: Appropriate respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless to slightly yellow liquid

pH: No data available

Solubility: Miscible with Water

Melting Point: No data available

Vapor Density: No data available

Vapor Pressure: No data available

Odor: No data available

Odor Threshold: No data available

Viscosity: No data available

Relative Density: No data available

Evaporation Rate: No data available

Initial Boiling Point and Boiling Range: No data available

Flammability (solid, gas): No data available

Partition coefficient: No data available  
n-octanol/water):

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Flash Point (Closed Cup): No data available

Flammable Limits: Upper (%) – No data available Lower (%) – No data available

## 10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of use – is a strong dehydrating agent

Possibility of Hazard Reactions: Will not occur

Conditions to Avoid: Moisture, incompatibles

Incompatibles Materials: Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, e.g. potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with:, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals

Hazardous Decomposition Products: Sulfur oxides, hydrogen gas

## 11. TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg):	2140
	LD <sub>50</sub> (Oral-Mouse)(mg/Kg):	No data available
	LD <sub>50</sub> (Dermal-Rabbit)(mg/Kg):	No data available
Carcinogenicity:	NTP:	No
	IARC:	Group 1
	Z List:	No
	OSHA Reg:	No
Reproductive Toxicity:	No data available	
Symptoms Associated with Overexposure:	Irritation, itching, gastrointestinal upset, nausea, vomiting, headache, possible mutagenic and reproductive effects, possible tumorigenic effects, breathing problems, burns, pulmonary edema, coughing, muscle weakness, eye damage, effects to the brain, cardiac effects, possible kidney impairment, blood effects, effects on smell, damage to teeth	
Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available
Target Organs:	Respiratory system, eyes, skin, teeth, kidneys	
Medical Conditions Aggravated By Exposure:	Pre-existing conditions	
Routes of Entry:	Ingestion, inhalation, skin and eye contact	
NIOSH/RTECS NO:	WS5600000	

***The toxicological properties of this product have not been thoroughly investigated***

## 12. ECOLOGICAL INFORMATION

Ecotoxicity:	No data available
Persistence and Degradability:	No data available
Bioaccumulative Potential:	No data available
Mobility in Soil:	No data available
Other Adverse Effects:	No data available

## 13. DISPOSAL CONSIDERATION

Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations.
EPA Hazardous Waste Number:	No data available

## 14. TRANSPORT INFORMATION

Domestic (D.O.T.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A

### International:

IMDG:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A

UN/NA: N/A  
Labels: N/A

IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

## 15. REGULATORY INFORMATION

TSCA: Yes

### SARA TITLE III:

Section 302 (EHS) Ingredients: No  
Section 313 Ingredients: CAS No.: 7664-93-9 Sulfuric acid  
Section 304 (EHS/CERCLA) Ingredients: No  
Section 311/312 Hazard: Chronic Health Hazard  
Massachusetts Right to Know Components: CAS No.: 7664-93-9 Sulfuric acid  
Pennsylvania Right to Know Components: CAS No.: 7664-93-9 Sulfuric acid  
CAS No.: 7732-18-5 Water  
New Jersey Right to Know Components: CAS No.: 7664-93-9 Sulfuric acid  
CAS No.: 7732-18-5 Water  
California Prop. 65 Components: CAS No.: 7664-93-9 Sulfuric acid  
WARNING! This product contains a chemical known to the State of California to cause cancer.

## 16. OTHER INFORMATION

HMIS Rating:	Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
	3	*	0	2
NFPA Rating:	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
	3	0	0	

\*Chronic Hazard: Chronic (long-term) health effects may result from repeated overexposure.

***PhytoTechnology Laboratories®* provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. *PhytoTechnology Laboratories®* shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

Revision Date: 6 May 15