



Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Sulfuric Acid, 50% (v/v)
NCL Catalog Number	S-96
Product Description	Laboratory chemical
Supplier	
NCL of Wisconsin, Inc.	Telephone: 1-800-648-7836 Fax: 715-449-2454
P.O. Box 8	Emergency Contact: 1-800-424-9300 (Chemtrec)
Biramwood, WI 54414	Email: nclabs@nclabs.com

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Corrosive to Metals	Category 1
Skin Corrosion	Category 1B
Serious Eye Damage	Category 1
Aquatic Acute	Category 3



Signal Word

Danger

Hazard Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.

Precautionary Statements

P234	Keep only in original packaging.
P260	Do not breathe mist/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.
P406	Store in a corrosion resistant container with a resistant inner liner.
P501	Dispose of contents/container to comply with local, state and federal regulations.

Other Hazards Not Contributing to the Classification

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity Not applicable

Common Name Not applicable

Mixture

Name	CAS #	Approximate %
Sulfuric Acid (96%)	7664-93-9	65
Water	7732-18-5	35

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled Remove person to fresh air and keep comfortable for breathing. Allow victim to rest. Immediately call a POISON CENTER or doctor.

In Case of Skin Contact Remove all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.

In Case of Eye Contact Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

If Swallowed Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

Most Important Symptoms/Effects Acute and Delayed

After Eye Contact Causes severe skin burns and serious eye damage.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Foam. Dry powder. Sand. Carbon dioxide. Water spray.

Unsuitable Extinguishing Media Do not use high pressure water stream.

Special Hazards Arising from the Chemical Thermal decomposition generates corrosive vapors. Reacts with some metals to release highly flammable gases/vapors.

Special Protective Actions for Fire-Fighters Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources. Ventilate area.

Environmental Precautions Prevent entry to surface and ground waters.

Methods and Materials for Containment and Cleaning Up Clean up spill with inert absorbent material. Collect spillage. Store away from; strong bases, metals, cyanides and heat sources. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Conditions for Safe Storage Including any Incompatibilities Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from; strong acids and

metals. Do not store in corrodible metal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sulfuric Acid (96%) (7664-93-9)		
USA ACGIH	ACGIH (TWA) (mg/m ³)	0.2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures

Avoid all unnecessary exposure.

Eye/Face Protection

Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material.

Skin Protection

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection

Wear appropriate mask.

Other Information

Do not eat, drink, or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Colorless
Odor	Slightly acidic
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	Not determined
Initial Boiling Point and Boiling Range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	1.56
Solubility	Soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Thermal decomposition generates corrosive vapors.
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	Reacts water, steam, carbonates, cyanides and sulfides.
Conditions to Avoid	Extremely high or low temperatures. Heat and sunlight can contribute to instability.
Incompatible Materials	Metals, strong bases, metal oxides, hydroxides, amines, and alkaline materials.
Hazardous Decomposition Products	When heated to decomposition, can emit toxic gases, sulfur compounds. Thermal decomposition generates corrosive vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Not classified
Sulfuric Acid (96%) (7664-93-9)	
LD50 oral rat	2140 mg/kg
Water (7732-18-5)	
LD50 oral rat	≥90000 mg/kg
Skin Corrosion/Irritation	Causes severe skin burns.
Serious Eye Damage/Irritation	Causes serious eye damage.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available
Symptoms/Injuries After Eye Contact	Causes serious eye damage.
Chronic Symptoms	Not available
Other Information	Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Harmful to aquatic life.
Sulfuric Acid (96%) (7664-93-9)	
LC50 fish 1	42 mg/l (96 h; Gambusia affinis)
EC50 Daphnia 1	29 mg/l (24 h; Daphnia magna)
LC50 fish 2	49 mg/l (48 h; Lepomis macrochirus)
TLM fish 1	42 mg/l (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	6900 mg/l (24 h; Pseudomonas fluorescens)
Persistence and Degradability	Not applicable
Bioaccumulative Potential	Bioaccumulation: Not applicable Log Pow: -2.20 (Estimated value)
Mobility in Soil	No additional information available.
Other Adverse Effects	Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations	Dispose of contents/containers in accordance with local, state and federal regulations.
Other Information	Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number	1830
UN Shipping Name	Sulfuric acid solution, with more than 51% acid.
Transport Hazard Class(es)	8
Packing Group	II
Environmental Hazards	Not applicable
Transport in Bulk	Not applicable
Other Precautions	Not applicable

SECTION 15: REGULATORY INFORMATION

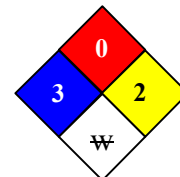
Sulfuric Acid, 50% (v/v)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Sulfuric Acid (96%) (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable Quantity)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

SECTION 16: OTHER INFORMATION

Revision Date: 03/25/2015

NFPA Hazards

Health Hazard	3: Short exposure could cause serious temporary or residual injury even.
Fire Hazard	0: Materials that will not burn.
Reactivity/Instability	2: Unstable; may undergo violent decomposition, but will not detonate. May form explosive mixtures with water.
Special Hazard	W: Water reactive



HMIS III Rating

Health	3: Major injury likely unless prompt action is taken and medical treatment is given.
Flammability	0: Materials that will not burn.
Physical Hazard	2: Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.
Personal Protection	H

S-96	
Health	3
Flammability	0
Physical Hazard	2
Personal Protection	H

The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, NCL of Wisconsin, Inc. makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for their conditions of use. Accordingly, NCL of Wisconsin, Inc. will not be responsible for damages of any kind resulting from the use of or reliance upon such information.

END OF SAFETY DATA SHEET