Safety Data Sheet

Issuing Date Apr-06-2015 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name **Sulfuric Acid 1:1**

Other means of identification

Product Code(s) **6141**

UN-No 1830

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals. Use as a laboratory reagent. Industrial (not for food or food contact use).

Details of the supplier of the safety data sheet

Manufacturer Address
LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

Emergency telephone number

24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A

EMERGENCY OVERVIEW

DANGER

Hazard statements
Causes severe skin burns and eye damage. May cause cancer.

Appearance Clear, colorless **Physical state** liquid **Odor** Odorless

Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED, Rinse mouth, Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Other Hazards
May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sulfuric acid	7664-93-9	64

4. FIRST AID MEASURES

First Aid Measures

General advice Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical. Carbon dioxide (CO_2). DO NOT USE WATER.

Specific hazards arising from the chemical
React vigorously and/or explosively with water.

Hazardous combustion products
Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, then containerize slurry and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials such as cyanides or sulfides. Store away from strong bases or metals. Do not store near combustible materials. Keep out of the reach of children.

Incompatible Products Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Gloves & Lab Coat. Wear protective gloves/clothing. Impervious clothing. Rubber gloves. Nitrile rubber.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	**Odor**	Odorless

Property	**Values**	**Remarks • Method**
pH		No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	<100 °C / 214 °F	
Flash point	No information available	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	~3.4 (water = 1)	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Hazardous Reactions	Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible Products. Protect from light.
Incompatible materials	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.
Hazardous decomposition products	Hydrogen gas. Sulfur oxides (SOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m³ (Rat) 2 h

Information on toxicological effects

Sensitization No information available

Chemical name	ACGIH	IARC	NTP	OSHA

Sulfuric acid 7664-93-9	A2	Group 1	Known	X

Chronic toxicity Chronic exposure to corrosive mists or vapors may cause erosion of the teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard.

ATEmix (oral) 3344 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 0 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfuric acid 7664-93-9	Not Established	500: 96 h Brachydanio rerio mg/L LC50 static	29: 24 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical name	Log Pow
Sulfuric acid 7664-93-9	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of contents/containers in accordance with local regulations. When in compliance with local regulations, neutralize reagent to pH 7 with dilute base (NaOH/soda ash/slaked lime), then rinse to drain with excess water.

Contaminated packaging Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sulfuric acid 7664-93-9	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfuric acid 7664-93-9	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Sulfuric acid 7664-93-9	-

14. TRANSPORT INFORMATION

DOT

Proper shipping name SULFURIC ACID (> 51%ACID)
UN-No 1830
Hazard Class 8
Packing group II
Reportable Quantity (RQ) 1000

IATA

Proper shipping name SULFURIC ACID (> 51%ACID)

UN-No	1830
Hazard Class	8
Packing group	II

IMDG/IMO

Proper shipping name	SULFURIC ACID (> 51%ACID)
UN-No	1830
Hazard Class	8
Packing group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Sulfuric acid 7664-93-9	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	Not Established	Not Established	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ

Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to "inorganic mists containing sulfuric acid" and not to sulfuric acid or sulfuric acid solutions

Chemical name	California Proposition 65
Sulfuric acid 7664-93-9	Carcinogen

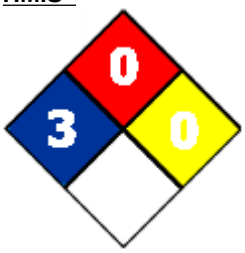
U.S. State Right-to-Know Regulations

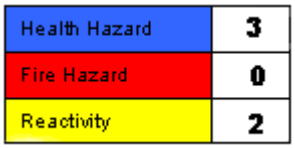
Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	X	X

16. OTHER INFORMATION

NFPA **Health hazard** 3 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** W

HMIS **Health hazard** 0 **Flammability** 0 **Stability** 2





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Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet