



SAFETY DATA SHEET

Product Trade Name: SULFURIC ACID, STANDARDIZED 0.02N (N/50)

Revision Date: 19-Apr-2017

Revision Number: 15

1. Identification

1.1. Product Identifier

Product Trade Name: SULFURIC ACID, STANDARDIZED 0.02N (N/50)
Synonyms None
Chemical Family: Inorganic acid
Internal ID Code HM004008

1.2 Recommended use and restrictions on use

Application: Reagent
Uses advised against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Fann Instrument Company
A Halliburton Energy Services, Inc. Company
P.O. Box 4350
Houston, TX 77210
Telephone: (281) 871-4482

Halliburton Energy Services
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Carcinogenicity	Category 1A - H350
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2.2. Label Elements

Hazard Pictograms



Signal Word:	Danger
Hazard Statements	H350 - May cause cancer
Precautionary Statements	
Prevention	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection
Response	P308 + P313 - IF exposed or concerned: Get medical advice/attention
Storage	P405 - Store locked up
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Sulfuric acid	7664-93-9	0.1 - 1%	Skin Corr. 1A (H314) Eye Corr. 1 (H318) Carc. 1 (H350) STOT SE 3 (H335) Aquatic Acute 3 (H402)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First Aid Measures

4.1. Description of first aid measures

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Eyes	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Carcinogen.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

Water must not be used with open containers.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Use water spray to cool fire exposed surfaces. Do not allow runoff to enter waterways. Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize with lime slurry, limestone, or soda ash. Scoop up and remove.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Sulfuric acid	7664-93-9	TWA: 1 mg/m ³	TWA: 0.2 mg/m ³

8.2 Appropriate engineering controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures,

the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

Acid gas respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid	Color	Clear colorless
Odor: Odorless	Odor	No information available
	Threshold:	

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	2
Freezing Point / Range	No data available
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	0.5
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
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10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Will Not Occur

10.4. Conditions to avoid

None anticipated

10.5. Incompatible materials

Strong alkalis. Reducing agents. Alcohols. Aldehydes. Acrylates. Prolonged contact with aluminum, lead, or zinc may liberate flammable hydrogen.

10.6. Hazardous decomposition products

Oxides of sulfur. Toxic fumes.

11. Toxicological Information**11.1 Information on likely routes of exposure**

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics**Acute Toxicity**

Inhalation May cause respiratory irritation.
Eye Contact May cause eye irritation.
Skin Contact May cause skin irritation.
Ingestion Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity Contains sulfuric acid, a potential carcinogen.

11.3 Toxicity data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	7664-93-9	2140 mg/kg-bw (rat)	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Sulfuric acid	7664-93-9	Causes severe burns

Substances	CAS Number	Serious eye damage/irritation
Sulfuric acid	7664-93-9	Causes serious eye damage

Substances	CAS Number	Skin Sensitization
Sulfuric acid	7664-93-9	Not regarded as a sensitizer.

Substances	CAS Number	Respiratory Sensitization
Sulfuric acid	7664-93-9	No information available

Substances	CAS Number	Mutagenic Effects
Sulfuric acid	7664-93-9	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Sulfuric acid	7664-93-9	This substance is a potential carcinogen.

Substances	CAS Number	Reproductive toxicity
Sulfuric acid	7664-93-9	Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Sulfuric acid	7664-93-9	May cause respiratory irritation. No information available

Substances	CAS Number	STOT - repeated exposure
Sulfuric acid	7664-93-9	Not applicable due to corrosivity of the substance.

Substances	CAS Number	Aspiration hazard
Sulfuric acid	7664-93-9	Not applicable

12. Ecological Information

12.1. Toxicity**Substance Ecotoxicity Data**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Sulfuric acid	7664-93-9	No information available	LC50 (96 h) 16 mg/L (Lepomis macrochirus) LC50 (96 h) 42 mg/L (Gambusia affinis)	No information available	EC50 (24 h) 29 mg/L (Daphnia magna) EC50 (48 h) 42.5 mg/L (Pandalus montagui)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Sulfuric acid	7664-93-9	Readily biodegradable

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Sulfuric acid	7664-93-9	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Sulfuric acid	7664-93-9	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods**

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
 UN proper shipping name: Not restricted
 Transport Hazard Class(es): Not applicable
 Packing Group: Not applicable
 Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Special Precautions for User None

15. Regulatory Information**US Regulations**

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Sulfuric acid	7664-93-9	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Sulfuric acid	7664-93-9	1000 lb

EPA SARA (311,312) Hazard Class

Chronic Health Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Sulfuric acid	7664-93-9	1.0%	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Sulfuric acid	7664-93-9	1000 lb 454 kg

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Corrosivity D002

California Proposition 65

Substances	CAS Number	California Proposition 65
Sulfuric acid	7664-93-9	carcinogen

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Sulfuric acid	7664-93-9	Extraordinarily hazardous	1761	Environmental hazard

NFPA Ratings: Health 1, Flammability 0, Reactivity 0

HMIS Ratings: Health 1, Flammability 0, Reactivity 0

Canadian Regulations

Canadian Domestic Substances All components listed on inventory or are exempt.
List (DSL)

16. Other information

Preparation Information

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

Revision Date: 19-Apr-2017

Reason for Revision SDS sections updated:
1

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
d - day
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
h - hour
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/
OSHA
ECHA C&L

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End of Safety Data Sheet