Material Safety Data Sheet

Sulphuric Acid 0.1000N

1 . Product and company identification

Product name : Sulphuric Acid 0.1000N

Product code : SX1243G

Supplier : EMD Chemicals Inc.
480 S. Democrat Rd.
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday-Friday: 8:00 -5:00 PM

Synonym : None.

Material uses : Other non-specified industry: Laboratory Reagent

Validation date : 3/25/2009.

In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

2 . Hazards identification

Emergency overview : WARNING!

MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF INHALED OR SWALLOWED.
SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

WARNING: This product contains a chemical known to the State of California to cause cancer.

Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Inhalation. Ingestion.

Potential acute health effects

Inhalation : May be harmful if inhaled.May cause respiratory irritation.

Ingestion : May be harmful if swallowed.

Skin : May cause skin irritation.

Eyes : May cause eye irritation.

Potential chronic health effects

Carcinogenicity : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : None known.

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	% by weight
Sulfuric Acid	7664-93-9	0.1 - 1
Water	7732-18-5	99 - 100

4 . First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : No specific data.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on explosion hazards : Can react with certain metals to release explosive hydrogen gas.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

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7 . Handling and storage

Handling : Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container, protected from direct sunlight. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
Sulfuric Acid	**ACGIH TLV (United States, 1/2008).** TWA: 0.2 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2008).** TWA: 1 mg/m³ 10 hour(s). **OSHA PEL (United States, 11/2006).** TWA: 1 mg/m³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: face shield , safety glasses with side-shields

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: chemical-resistant protective suit and gloves

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9 . Physical and chemical properties

Physical state	:	Liquid.
Color	:	Clear. Colorless.
Odor	:	Odorless.
pH	:	<2
Boiling/condensation point	:	Not available.
Melting/freezing point	:	Not available.
Relative density	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Odor threshold	:	Not available.
Evaporation rate	:	0.36 (Water) compared with(n-Butyl Acetate =1)
Solubility	:	Soluble in the following materials: water

10 . Stability and reactivity

Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	:	Avoid exposure - obtain special instructions before use.
Materials to avoid	:	Highly reactive or incompatible with the following materials: oxidizing materials, reducing materials, combustible materials, organic materials, metals and alkalis. Reacts violently with water, especially when water is added to the product. Avoid excessive heat. Incompatible with metal carbonates, cyanides, sulphides, acetylides, hydrides, halogens, perchlorates. Incompatable with Strong Bases
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions of reactivity	:	Can react with certain metals to release explosive hydrogen gas.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Test	Route	Species	Result
Sulfuric Acid	LD50	Oral	Rat	2140 mg/kg
	LD50	Oral	Rat	2140 mg/kg
	LD50	Oral	Rat	2140 mg/kg
	LD50	Oral	Rat	350 mg/kg
	LC50	Inhalation Vapor	Rat	510 mg/m3
	LC50	Inhalation Vapor	Mouse	320 mg/m³

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Sulfuric Acid	A2	1	-	-	Proven.	-

Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

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12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Sulfuric Acid	Acute LC50 70000 to 80000 ug/L Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Adult	48 hours
	Acute LC50 42500 ug/L Marine water	Crustaceans - Aesop shrimp - Pandalus montagui - Adult	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-		No additional remark.

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Irritating material
Carcinogen

U.S. Federal regulations : TSCA 8(b) inventory: Sulphuric Acid 0.1000N

All components of this product are listed on or compliant with the TSCA Inventory.

SARA 302/304/311/312 extremely hazardous substances: SULFURIC ACID
SARA 302/304 emergency planning and notification: Sulphuric Acid 0.1000N
SARA 302/304/311/312 hazardous chemicals: Sulphuric Acid 0.1000N
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: SULFURIC ACID: reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Sulfuric Acid

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	Sulfuric Acid	7664-93-9	0.1 - 1
Supplier notification :	Sulfuric Acid	7664-93-9	0.1 - 1

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15 . Regulatory information

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Connecticut Carcinogen Reporting : None of the components are listed.

Connecticut Hazardous Material Survey : None of the components are listed.

Florida substances : None of the components are listed.

Illinois Chemical Safety Act : None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act : None of the components are listed.

Louisiana Spill : None of the components are listed.

Louisiana Reporting : None of the components are listed.

Massachusetts Spill : None of the components are listed.

Massachusetts Substances : None of the components are listed.

Minnesota Hazardous Substances : None of the components are listed.

Michigan Critical Material : None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act : None of the components are listed.

New Jersey Spill : None of the components are listed.

New Jersey Hazardous Substances : The following components are listed: Sulfuric Acid 0.1000N

New York Toxic Chemical Release Reporting : None of the components are listed.

New York Acutely Hazardous Substances : The following components are listed: Sulfuric acid

Pennsylvania RTK Hazardous Substances : The following components are listed: Sulfuric Acid

Rhode Island Hazardous Substances : None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Sulfuric Acid	Yes.	No.	No.	No.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

EU regulations

Risk phrases : This product is not classified according to EU legislation.

International regulations

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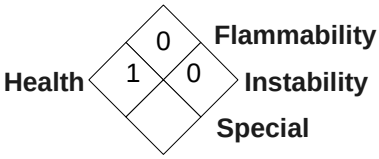
15 . Regulatory information

International lists : **Australia inventory (AICS):** All components are listed or exempted.
China inventory (IECSC): Not determined.
Japan inventory (ENCS): All components are listed or exempted.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): All components are listed or exempted.

16 . Other information

National Fire Protection Association (U.S.A.) :



Notice to reader

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