according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

1 Identification Product identifier • Trade name: Sulfuric Acid 0.02N (N/50) · Product code: MTK-627-1G Recommended use and restriction on use · Recommended use: Laboratory chemicals Restrictions on use: No relevant information available. • Details of the supplier of the Safety Data Sheet · Manufacturer/Supplier: AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 USA Tel +1 (717)632-1291 Toll-Free: (866)632-1291 info@aquaphoenixsci.com Distributor: Dubois Chemicals Inc. 3630 East Kemper Rd. Cincinnati, OH 45241 (800) 438-2647 · Emergency telephone number: ChemTel Inc. (800)255-3924 (North America) +1 (813)248-0585 (International)

2 Hazard(s) identification

[•] Classification of the substance or mixture

The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

- [•] Label elements
- · GHS label elements Not regulated.
- · Hazard pictograms: Not regulated.
- · Signal word: None.
- · Hazard statements: Not regulated.

• **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

[•] Chemical characterization: Substances

· Components:

7732-18-5 Water

7664-93-9 Sulfuric acid

🚸 Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318

• Additional information:

For the wording of the listed Hazard Statements, refer to section 16.

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

>95%

<5%

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

Trade name: Sulfuric Acid 0.02N (N/50)

(Cont'd. of page 1)

4 First-aid measures

[•] Description of first aid measures

• After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Rinse with warm water.

If skin irritation is experienced, consult a doctor.

• After eye contact:

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Nausea in case of ingestion.

Gastric or intestinal disorders when ingested.

· Indication of any immediate medical attention and special treatment needed:

No relevant information available.

5 Fire-fighting measures

• Extinguishing media

• Suitable extinguishing agents:

The product is not flammable.

Use fire fighting measures that suit the environment.

- · For safety reasons unsuitable extinguishing agents: None.
- Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters

· Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

[•] Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Methods and material for containment and cleaning up

Use limestone to neutralize and/or absorb spill.

Clean the affected area carefully; suitable cleaners are:

Warm water

Send for recovery or disposal in suitable receptacles.

Reference to other sections

(Cont'd. on page 3)

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

Trade name: Sulfuric Acid 0.02N (N/50)

(Cont'd. of page 2)

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

[·] Handling

· Precautions for safe handling:

Avoid splashes or spray in enclosed areas. Use only in well ventilated areas. Avoid breathing mist, vapors, or spray. Avoid contact with the eyes and skin.

[•] Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

Use only receptacles specifically permitted for this substance/product. Unsuitable material for receptacle: aluminium.

Store in cool, dry conditions in well sealed receptacles.

• Information about storage in one common storage facility: Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

• **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

[·] Control parameters

· Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7664-93-9 Sulfu	iric acid
PEL (USA)	Long-term value: 1 mg/m ³
REL (USA)	Long-term value: 1 mg/m³
TLV (USA)	Long-term value: 0.2* mg/m³ *as thoracic fraction
EL (Canada)	Long-term value: 0.2 mg/m³ ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.2 mg/m³
LMPE (Mexico)	Long-term value: 0.2* mg/m³ A2,*fracción torácica

Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

(Cont'd. on page 4)

Safety Data Sheet according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

	(Cont'd. of page 3
• Engineering controls: Provide adequate ventilation.	
 Breathing equipment: Not required under normal conditions of use. 	
For spills, respiratory protection may be advisable.	
· Protection of hands:	
Protective gloves	
· Eye protection:	
Safety glasses	
Follow relevant national guidelines concerning the use of protective eyewear. • Body protection: Protection may be required for spills.	
Limitation and supervision of exposure into the environment	

No relevant information available.

· Risk management measures No relevant information available.

9 Physical and chemical prope	rties	
[·] Information on basic physical a	nd chemical properties	
Appearance:		
Form:	Liquid	
Color:	Colorless	
Odor:	Sulphurous	
· Odor threshold:	Not determined.	
· pH-value:	Slightly acidic	
· Melting point/Melting range:	Not determined.	
 Boiling point/Boiling range: 	Not determined.	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Not applicable.	
· Auto-ignition temperature:	Not determined.	
· Decomposition temperature:	Not determined.	
[.] Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits		
Lower:	Not determined.	
Upper:	Not determined.	
 Oxidizing properties: 	Non-oxidizing.	
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)	
· Density:		
Relative density:	Not determined.	
Vapor density:	Not determined.	
		(Cont'd. on page

Safety Data Sheet according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

de name: Sulfurie Acid 0.020	I (N/50)	
de name: Sulfuric Acid 0.02N	1 (N/50)	
	(Cont'd.	of pag
Evaporation rate:	Not determined.	
Solubility in / Miscibility with		
Water:	Soluble.	
Partition coefficient (n-octan	ol/water): Not determined.	
Viscosity		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Other information	No relevant information available.	
Stability and reactivity		
Reactivity: No relevant inform	nation available.	
Chemical stability:		
Thermal decomposition / cor		
•	stored according to specifications.	
Possibility of hazardous re		
	heated above the decomposition point.	
Reacts with certain metals. Reacts with alkali (lyes).		
	way from oxidizing agents	
Conditions to avoid Store a		
Conditions to avoid Store a Incompatible materials Alk	alis	
Conditions to avoid Store a Incompatible materials Alk		
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition	alis products Sulfur oxides (SOx)	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatio	alis products Sulfur oxides (SOx) n	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic	alis products Sulfur oxides (SOx) n alis al effects	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail	alis products Sulfur oxides (SOx) n al effects able data, the classification criteria are not met.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev	alis products Sulfur oxides (SOx) n al effects able data, the classification criteria are not met.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect:	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on availab	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. rant for classification: None. le data, the classification criteria are not met.	_
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on availab On the eye: Based on availab	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on availab	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological information Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing e	alis products Sulfur oxides (SOx) on cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer):	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological information Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing en IARC (International Agency for None of the ingredients are listed NTP (National Toxicology Pro-	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing et IARC (International Agency for None of the ingredients are listed NTP (National Toxicology Pro 7664-93-9 Sulfuric acid	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram):	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatio Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing e IARC (International Agency for None of the ingredients are listed NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. rant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration):	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing et IARC (International Agency for None of the ingredients are liste NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe None of the ingredients are liste	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration): ed.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatic Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing et IARC (International Agency for None of the ingredients are liste NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe None of the ingredients are liste Probable route(s) of exposur	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration): ed.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatio Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing et IARC (International Agency for None of the ingredients are liste NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe None of the ingredients are liste Probable route(s) of exposur Ingestion.	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration): ed.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological information Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are releve Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing en IARC (International Agency for None of the ingredients are listed NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe None of the ingredients are listed Probable route(s) of exposur Ingestion. Inhalation.	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration): ed.	
Conditions to avoid Store a Incompatible materials Alk Hazardous decomposition Toxicological informatio Information on toxicologic Acute toxicity: Based on avail LD/LC50 values that are relev Primary irritant effect: On the skin: Based on available Sensitization: No sensitizing et IARC (International Agency for None of the ingredients are liste NTP (National Toxicology Pro 7664-93-9 Sulfuric acid OSHA-Ca (Occupational Safe None of the ingredients are liste Probable route(s) of exposur Ingestion.	alis products Sulfur oxides (SOx) n cal effects able data, the classification criteria are not met. vant for classification: None. le data, the classification criteria are not met. e data, the classification criteria are not met. ffects known. or Research on Cancer): ed. ogram): ty & Health Administration): ed.	

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

Trade name: Sulfuric Acid 0.02N (N/50)

(Cont'd. of page 5)

· Germ cell mutagenicity: Based on available data, the classification criteria are not met.

• Carcinogenicity: Based on available data, the classification criteria are not met.

• **Reproductive toxicity:** Based on available data, the classification criteria are not met.

• **STOT-single exposure:** Based on available data, the classification criteria are not met.

• STOT-repeated exposure: Based on available data, the classification criteria are not met.

• Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

[·] Toxicity

· Aquatic toxicity No relevant information available.

· Persistence and degradability No relevant information available.

· Bioaccumulative potential: No relevant information available.

• Mobility in soil: No relevant information available.

Additional ecological information

· General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Other adverse effects No relevant information available.

13 Disposal considerations

[·] Waste treatment methods

· Recommendation:

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

[·] Uncleaned packagings

• Recommendation: Disposal must be made according to official regulations.

14 Transport information		
[·] UN-Number · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.	
 UN proper shipping name DOT, ADR/RID/ADN, IMDG, IATA 	Not regulated.	
· Transport hazard class(es)		
· DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.	
 Packing group DOT, ADR/RID/ADN, IMDG, IATA 	Not regulated.	
		(Cont'd. on page 7)

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

	(Cont'd. of pa
· Environmental hazards	
· Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to An	nex II of
MARPOL73/78 and the IBC Code	Not applicable.
 Safety, health and environmenta mixture United States (USA) SARA 	regulations/legislation specific for the substance
mixture United States (USA) SARA Section 302 (extremely hazardous sul	
 Safety, health and environmenta mixture United States (USA) SARA Section 302 (extremely hazardous sul None of the ingredients are listed. 	stances):
 Safety, health and environmenta mixture United States (USA) SARA Section 302 (extremely hazardous sultation) 	stances):
 Safety, health and environmenta mixture United States (USA) SARA Section 302 (extremely hazardous sul None of the ingredients are listed. Section 313 (Specific toxic chemical I 	stances):
 Safety, health and environmenta mixture United States (USA) SARA Section 302 (extremely hazardous sul None of the ingredients are listed. Section 313 (Specific toxic chemical I None of the ingredients are listed. 	stances):

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

7664-93-9 Sulfuric acid

Canadian Domestic Substances List (DSL):

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

1

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 04, 2020

Trade name: Sulfuric Acid 0.02N (N/50) (Cont'd. of page 7) Abbreviations and acronyms: ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent OSHA: Occupational Safety & Health Administration Met. Corr.1: Corrosive to metals - Category 1 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Eye Dam. 1: Serious eye damage/eye irritation - Category 1 · Sources Website, European Chemicals Agency (echa.europa.eu) Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ overview/home.do) Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org) Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5. Safety Data Sheets, Individual Manufacturers SDS Prepared by: ChemTel 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtel.com