



SAFETY DATA SHEET

5% H₂SO₄**1. Identification of the substance and of the supplier****Product identifier**Chemical name 5% H₂SO₄**Recommended use of the chemical and restrictions on use**

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Manufacturer/ supplier details

Company name **Ya Thai Chemical Co., Ltd.**
 Company address 78/9 Moo 5 Takam, Bangpakong,
 Chachoengsao 24130 THAILAND
 Phone number 66-3857-4400
 Fax 66-3857-3700
 Emergency phone number -

2. Hazard Identification**GHS classification of the substance/ mixture****Health hazards**

Skin corrosion/ irritation

Category 1

Other hazard than mentioned above are "Not classified", "Classification not possible" or "Not applicable".

GHS label elements**Pictogram****Signal word****Danger****Hazard statements**

H314 Causes severe skin burns and eye damage.

Precautionary statements**Prevention**

P260 Do not breathe dusts or mists.

P264 Wash face, hands and any exposed skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302+P361+P354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P316 Get emergency medical help immediately.

P363 Wash contaminated clothing before reuse.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

3. Composition/ Information on Ingredients

Substance/ mixture	Substance (liquid)		
Components	CAS No.	Concentration %	
Sulfuric acid	7664-93-9	1-5	

4. First Aid Measures

Description of first aid measure

Inhalation

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Eye contact

Check remove contact lenses if possible to do. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed

Severe skin and eye irritation or burns.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Unsuitable extinguishing media

No information available.

Special hazards arising from the substance or mixture

Gives off irritating or toxic fumes (or gases) in a fire.

When heated to decomposition it emits toxic fumes of sulfur oxide, carbon oxides.

Special protective equipment and precautions for fire-fighters

Wear self-contained breathing apparatus (SCBA) for firefighting if necessary.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required.

Keep unprotected persons away.

In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental precautions

Do not let product enter drains. Keep water away from release.

Stop or control the leak, if this can be done without undue risk.

Methods and materials for containment and cleaning up

Liquid form, collect for reclamation or absorb in vermiculite, dry sand, earth, or a similar material.

For small spills, add absorbent or sand, scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. Handling and Storage**Precautions for safe handling**

Use personal protective equipment as required.

Ensure adequate ventilation. Evacuate personnel to safe areas.

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Worker should immediately wash the skin when it becomes contaminated.

Avoid breathing vapours, mist or gas.

In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure Controls/ Personal Protection**Control parameters**

Component	ACGIH (TLV)	NIOSH (REL)	OSHA (PEL)
Sulfuric acid 7664-93-9	- TWA: 0.2 mg/m ³ (thoracic particulate matter) ^[2000]	- TWA: 1 mg/m ³ - IDLH: 15 mg/m ³	- TWA: 1 mg/m ³ (see 29 CFR 1910.1000 Table Z-1)

ACGIH:

American Conference of Governmental Industrial Hygienists

OSHA:

Occupational Safety and Health Administration

NIOSH IDLH:

The National Institute for Occupational Safety and Health - Immediately Dangerous to Life or Health

Appropriate engineering controls

Use ventilation, local exhaust ventilation.

Personal protective equipment**Respiratory protection**

Use local exhaust or respirator masks.

Skin protection

Protective gloves.

Eye/ face protection

Wear safety goggles, safety glasses.

Body protection

Chemical suit, boots, aprons.

Work/ hygienic practices

Handle in accordance with good industrial hygiene and safety practice.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Remove contaminated clothing and protective equipment before entering eating areas.

9. Physical and Chemical Properties

Appearance and colour

Liquid, colourless

Odour

Odorless

Odour threshold	Not available
pH	<1.00
Melting point/ freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not flammable
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper/ lower flammability or explosive limits	Not available
Vapour pressure	Not available
Vapour density	Not available
Specific gravity	1.45-1.50 at 25 °C
Water solubility	Soluble in water
Partition coefficient: n-octanol/water log Pow	Not available
Auto ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Will not occurred.

Conditions to avoid

Not available.

Incompatible materials

Incompatible with oxidizing agents, metals and strong alkaline.

Hazardous decomposition products

When heated to decomposition it emits toxic fumes of sulfur oxide, and carbon oxides.

11. Toxicological Information

Numerical measures of toxicity

Classification of health hazards

Acute toxicity

Acute oral toxicity

- Sulfuric acid: LD₅₀ 2,140 mg/kg (rat)

Summation method:

ATE_{mix}: >5,000 mg/kg = Classified not possible.

Acute dermal toxicity

Not classified.

Acute inhalation toxicity

Not classified

Skin corrosion/ irritation

H314 Causes severe skin burns and eye damage.

Serious eye damage/ eye irritation

All ingredients in this mixture are not serious eye damage/ eye irritation effect.

Respiratory or skin sensitization

All ingredients in this mixture are not respiratory or skin sensitization effect.

Germ cell mutagenicity

All ingredients in this mixture are not germ cell mutagenicity effect.

Carcinogenicity

All ingredients in this mixture are not carcinogenicity effect.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	Not listed	Not listed	Not listed	X

- ACGIH (American Conference of Governmental Industrial Hygienists):

- IARC (International Agency for Research on Cancer):

- NTP (National Toxicology Program, U.S. Department of Health and Human Services):

- OSHA (Occupational Safety and Health Administration of the US Department of Labor):

Group A1: Confirmed human carcinogen
Group A2: Suspected human carcinogen
Group A3: Confirmed animal carcinogen with unknown relevance to humans
Group A4: Not classifiable as a human carcinogen
Group 1: Carcinogenic to humans
Group 2A: Probably carcinogenic to humans
Group 2B: Possibly carcinogenic to humans
Group 3: Not classifiable as to its carcinogenicity to humans
Group K: Known to be human carcinogens
Group R: Reasonably anticipated to be human carcinogens
OSHA regulated chemicals marked with "X"

Reproductive toxicity

All ingredients in this mixture are not reproductive toxicity effect.

Specific target organ toxicity (single exposure)

All ingredients in this mixture are not specific target organ toxicity (single exposure).

Specific target organ toxicity (repeated exposure)

All ingredients in this mixture are not specific target organ toxicity (repeated exposure).

Aspiration hazard

All ingredients in this mixture are not aspiration hazard effect.

12. Ecological Information

Ecotoxicity

Component	Algae/ aquatic plants	Fish	Crustacea
Sulfuric acid 7664-93-9	-	- Gambusia affinis (western mosquitofish): LC ₅₀ 42 mg/L/96hr ^{static}	- Pandalus montagui (aesop shrimp): LC ₅₀ 42.5 mg/L/48hr ^{renewal-salt water}

Acute (short-term) aquatic hazard

- Sulfuric acid: LC₅₀ 42 mg/L/96hr:
Gambusia affinis (fish)

Summation method:

EC50_{mix}: >100 mg/l = Classified not possible

Long-term aquatic hazard

Not classified

Persistence and degradability

Not available

Bio-accumulative potential

Not available

Mobility in soil

Not available

Other adverse effects

Not available

Environmental effects

Not available

13. Disposal Consideration

Waste treatment methods

Dispose in accordance with local/ national/ international regulations.

Contaminated packaging

Dispose of as unused product.

Dispose of container in accordance with local/ national/ international regulations.

14. Transport Information

International regulation

UN number

UN3264

UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Transport hazard class	8
Packaging group	III
Environmental hazards	Not available
Transport in bulk	Not available
Special precautions for user	Not available

15. Regulatory Information

Safety, health and environmental regulations/ legislation specific for the substance or mixture

Thailand

Notification of Ministry of Industry Subject: Sulfuric acid CAS 7664-93-9 (when concentration >50% w/w is classified as type 3, but concentration List of hazardous substances B.E. 2556 (2013) (Annex 5.1) specified in this product not classified as type 3)
This chemical not listed on the hazardous substances inventory.

Thailand

Notification of Ministry of Labour Subject: List of hazardous chemicals B.E. 2556 (2013) Sulfuric acid CAS 7664-93-9 (No.1318)
Is listed on the hazardous chemicals inventory.

Chemical safety assessment

For this product a chemical safety assessment was not carried out.

16. Other Information

Created July 21, 2023

Reference

- 1) GHS Classification Data from NIH (National Institutes of Health) Web Site: <https://pubchem.ncbi.nlm.nih.gov/>
- 2) GHS Classification Data from European Chemicals Agency (ECHA) Web Site: <https://echa.europa.eu/home>
- 3) <http://www.inchem.org/>
- 4) <https://www.osha.gov/chemicaldata/index.html>
- 5) <https://cfpub.epa.gov/ecotox/>
- 6) Thailand: Notification of Ministry of Industry Subject: List of hazardous substances B.E. 2556 (2013) (Annex 5.1)
- 7) Thailand: Notification of Ministry of Labour Subject: List of hazardous chemicals B.E. 2556 (2013)

NOTE:

This information herein is given in good faith, but no warranty, express or implied, is made. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used in caution. Although certain hazards are described herein. We cannot quarantine that These are the only hazards which exist.