



## SAFETY DATA SHEET

**50% H<sub>2</sub>SO<sub>4</sub>****1. Identification of the substance and of the supplier****Product identifier**Chemical name **50% H<sub>2</sub>SO<sub>4</sub>****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**Serious eye damage/ eye 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**

Causes severe skin burns and eye damage.

**Precautionary statements****Prevention**

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

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

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

**Response**

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

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

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Get emergency medical help immediately.  
Wash contaminated clothing before reuse.

**Storage**

Store locked up.

**Disposal**

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          | 49-51           |  |

### 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<br>7664-93-9 | - TWA: 0.2 mg/m <sup>3</sup><br>(thoracic particulate matter) <sup>[2000]</sup> | - TWA: 1 mg/m <sup>3</sup><br>- IDLH: 15 mg/m <sup>3</sup> | - TWA: 1 mg/m <sup>3</sup> (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

Stable under recommended storage conditions.

### Chemical stability

Not available.

### 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: LD<sub>50</sub> 2,140 mg/kg (rat)

Acute dermal toxicity

Acute inhalation toxicity

Summation method:

ATE<sub>mix</sub>: >5,000 mg/kg = Classified not possible.

Not classified.

Summation method:

ATE<sub>mix</sub> = >1.0-5.0 mg/l = Classified not possible.

Causes severe skin burns and eye damage.

#### Skin corrosion/ irritation

Causes serious eye damage.

#### Serious eye damage/ eye irritation

#### 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<br>7664-93-9 | Group A2 | Group 1 | 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<br>7664-93-9 | -                     | - Gambusia affinis (western mosquitofish): LC <sub>50</sub> 42 mg/L/96hr <sup>static</sup><br>- Brachydanio rerio (fresh water fish): LC <sub>50</sub> >500 mg/L/96hr <sup>static</sup> | - Pandalus montagui (aesop shrimp): LC <sub>50</sub> 42.5 mg/L/48hr <sup>renewal-salt water</sup> |

### Acute (short-term) aquatic hazard

- Sulfuric acid: LC<sub>50</sub> 42 mg/L/96hr: Gambusia affinis (fish)

### Summation method:

EC<sub>50</sub>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

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN3264                                      |
| <b>UN proper shipping name</b>      | Corrosive liquid, acidic, inorganic, n.o.s. |
| <b>Transport hazard class</b>       | 8   |
| <b>Packaging group</b>              | III   |
| <b>Environmental hazards</b>        | Not available                               |
| <b>Transport in bulk</b>            | Not available                               |
| <b>Special precautions for user</b> | Warning: Corrosive substances               |

## 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** March 25, 2022

#### 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.