PT. AIK MOH CHEMICALS INDONESIA
Komplex Bintang Makmur Industri Block FG No. 8-9
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GHS SAFETY DATA SHEET

SDS | Safety Data Sheet | Sulfuric Acid

Supplier:	
Company name	PT. Aik Moh Chemicals Indonesia
Address	Komplex Bintang Makmur Industri Block FG No. 8-9 Batam Center, Indonesia
Tel	(+62) 778 7431208 / 7431209
Fax	(+62) 778 7431211
Email	contact_us@aikmoh.com.sg
Website	www.aikmohbatam.com

1. Identification of the substance/mixture

1.1. Product identifier
Product name : Sulfuric Acid
Chemical family : Inorganic Acid

1.2. Relevant identified uses of the substance or mixture and advised against
Identified uses : Manufacture of fertilizers, manufacture of dyestuffs and pigments, manufacture of blowing Agent, manufacture of downstream of sulfate salts, bleaching earth, alkylation catalyst, electroplating baths, purification of petroleum.

2. Hazard Identification

2.1. Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Skin corrosion : category 1A, H314
Corrosive to metals, H290
For the full text of the H-Statements mentioned in this section, see section 16.

Classification (67/548/EEC or 1999/45/EC)
C; R35
For the full text of the R-phrases mentioned in this section, see section 16.

2.2. Label elements
Labelling (REGULATION (EC) No.1272/2008)

Hazard pictograms

Signal word
Danger

Hazard statements
H314 Causes severe skin burns and eye damage.
H290 May be corrosive to metals.

Precautionary statements
P280 Wear protective gloves/eye protection/face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P309 IF exposed or if you feel unwell:
P310 Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Labelling (67/548/EEC or 1999/45/EC)

Symbols(s)	C	Corrosive
R-phrase(s)	35	Causes severe burns
S-phrase(s)	26-30-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards
None known.

3. Composition / information on ingredients

Formula : H_2SO_4 H_2O_4S (Hill)
CAS No. : 7664-93-9
EC No. : 231-639-5
Molar mass : 98.08 g/mol

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (concentration)

CAS No.	EC No.	Classification
Sulphuric Acid (98.2 %)		
7664-93-9	231-639-5	Corrosive to metals, H290 Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this section, see section 16.

Hazardous components (1999/45/EC)

Chemical Name (concentration)

CAS No.	EC No.	Classification
Sulphuric Acid (98.2 %)		
7664-93-9	231-639-5	C; R35

For the full text of the R-phrases mentioned in this section, see section 16.

4. First aid measures

4.1. Description of first aid measures
After inhalation : fresh air. Call in physician
After skin contact : sweep by dry cloth and then wash off with plenty of water. Immediately remove contaminated clothing. Call a physician immediately.
After contact with eyes: rinse out with plenty of water. Immediatelly call in

ophthalmologist
After swallowing: make victim drink water, avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise

4.2. Most important symptoms and effects, both acute and delayed: Irritation and corrosion, Risk of blindness!.

4.3. Indication of immediate medical attention and special treatment needed: No information available

5. Fire-fighting measures

5.1. Extinguishing media
Suitable extinguishing media: use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given

5.2. Special hazards arising from the substance or mixture
No combustible. Ambient fire may liberate hazardous vapours.
Fire may cause evolution of : Sulphur oxides.

5.3. Advice for fire fighters
Special protective equipment for fire fighters : stay in danger area only with self contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing protective clothing.

6. Accidental release measures

6.1. Personal precaution, protective equipment and emergency procedures.
Advice for non emergency personnel : Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2. Environmental precautions
Do not empty into drains

6.3. Methods cleaning up
Take up with liquid-absorbent and neutralizing material (sand and lime). Clean up affected area.

6.4. Reference to the other sections
Indication about waste treatment see section 13.

7. Handling and storage

7.1. Precaution for safe handling
Use of personal protective equipment

7.2. Conditions for safe storage, including any incompatibilities
Tightly closed.
Storage temperature: ambient or room temperature

7.3. Specific end uses.
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment

Individual protection measures
Protective cloting needs to be selected specifically for the workplace, depending on concentration and quantities of the hazardous subtances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Hygiene measures
Immediately change contaminated clothing.Apply preventive skin protection.Wash hand and face after working with subtance.

Eye / face protection
Tightly fitting safety goggles

Hand protection
full contact :
Glove material : Viton (R)
Glove thickness : 0.70 mm
Break through time : > 480 min

splash contact :
Glove material : butyl-rubber
Glove thickness : 0.7 mm
Break through time : > 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Other protective equipment:
Acid-resistant protective clothing

Respiratory protection
Required when vapour/aerosols are generated.
Recommended filter type : Filter P2 (acc. To DIN 3181) for solid particles of harmful subsatances

Environmental exposure controls
Do not empty into drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid
Colour	Colorless to Yellowish
Odour	odourless

pH(25°C)	0.3 at 49 g/l
Melting point	-20 °C
Boiling point	ca. 335 °C
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid,gas)	No information available.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	ca. 0.0001 hPa at 20 °C
Relative vapour density	ca. 3.4
Relative density	1,83 g/cm^3 at 15 °C
Water solubility	soluble at 20 °C (caution! development of heat)
Partition coefficient: n-Octanol/water	No information available.
Decomposition temperature	ca. 338 °C
Viscosity, dynamic	ca. 24 mPa.s at 20 °C
Explosive properties	No information available
Oxidizing properties	No information available

9.2. Other data

Igniton temperature	not applicable
Bulk density	not applicable
Corrosion	May be corrosive to metals.

10. Stability and reactivity

10.1. Reactivity
Has a corrosive effect

10.2. Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions
A risk of explosion and/or of toxic gas information exists with the following substances.

Violent reactions possible with:
Water, Alkali metals, alkali compounds, Ammonia, Aldehydes, acetonitrile, Alkaline earth metals, alkalines, Acids, alkaline earth compounds, Metals, metal alloys, Oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, Nitriles, organic nitro compounds, anilines, Peroxides, picrates, nitrides, lithium silicade, iron(III) compounds, bromates, chlorates, Amines, perchlorates, hydrogen peroxide

10.4. Conditions to avoid
Strong heating

10.5. Incompatible materials
Animal/vegetable tissues, Metals
Contact with metals liberates hydrogen gas

10.6. Hazardous decomposition products
In the event of fire, see chapter 5.

11. Toxicological information

11.1. Information on toxicological effects
Acute inhalation toxicity
LC_{50} rat
Dose 510 mg/m^3, 2 h
(calculated on the pure substance) (IUCLID)

Skin irritation
rabbit.
Result: Causes burns.
(IUCLID)
Causes severe burns

Eye irritation
Rabbit
Result: Causes severe burns.
(IUCLID)

Risk of serious damage to eyes.
Risk of blindness!

Genotoxicity in vitro
Ames test
Result: negative
(IUCLID)

Teratogenicity
Did not show teratogenic effects in animal experiments. (IUCLID)

Specific target organ toxicity – single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ – repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
No aspiration toxicity classification.

11.2. Further information
Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

12.1. Toxicity
Toxicity to fish
LC_{50}
Species: Lepomis macrochirus (Bluegill sunfish)
Dose: 16-29 mg/l
Exposure time: 96 h
(External MSDS)

12.2. Persistence and degradability
No information available

12.3. Bioaccumulative potential
No information available

12.4. Mobility in soil
No information available

12.5. Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects.
Additional ecological information
Biological effects:
Form corrosive mixtures with water even if diluted.
Harmful effect due to pH shift.
Endangers drinking-water supplies if allowed to enter soil or water.
Further information on ecology : Do not allow to run into surface waters, wastewater, or soil.

13. Disposal considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

14. Transport information

ADR/RID
UN 1830 SULPHURIC ACID , 8, II

IATA
UN 1830 SULPHURIC ACID, 8, II

IMDG
UN 1830 SULPHURIC ACID, 8, II
EmS F-A S-B

The transport regulations are cited according to international regulations. Possible national deviations in other countries are not considered.

15. Regulatory information

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

EU regulations

Major accident hazard	96/82/EC
Legialation	Directive 96/82/EC does not apply
Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H290	may be corrosive to metals
H314	Causes severe skin burns and eye damage.

Full text of R-phrases referred to under sections 2 and 3.

R35	Causes severe burns.

Training advice
Provide adequate information, instruction and training for operators.

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The information accumulated here in is believed to be accurate but is not warranted to be whether originating with the company or not.

Health and safety data sheet should be used only as a guide to the safe handling of the product, and is not intended as a technical specification.

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