ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

Aminopterin

Revision Date:2026-03-21 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name	: Aminopterin
CBnumber	: CB6418254
CAS	: 54-62-6
EINECS Number	: 200-209-9
Synonyms	: AMINOPTERIN

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Danger

Precautionary statements

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

P201 Obtain special instructions before use.

Hazard statements

H300 Fatal if swallowed

H360 May damage fertility or the unborn child

SECTION 3: Composition/information on ingredients

Substance

Product name	: Aminopterin
Synonyms	: AMINOPTERIN
CAS	: 54-62-6
EC number	: 200-209-9
MF	: C19H20N8O5
MW	: 440.41

SECTION 4: First aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

No data available

SECTION 5: Firefighting measures

Suitable extinguishing media

Water Foam Carbon dioxide (CO_2) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting

Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products

Carbon oxides Nitrogen oxides (NOx)

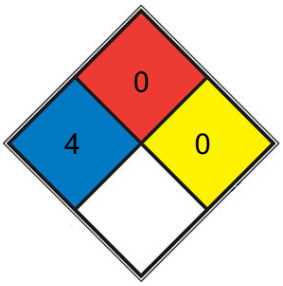
Specific extinguishing methods

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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 suitable protective clothing.

NFPA 704



■	HEALTH	4	Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, hydrofluoric acid)
■	FIRE	0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7: Handling and storage

Handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Avoidance of contact

Strong oxidizing agents

Storage

Further information on storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Storage class

6.1A, Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Recommended storage temperature

-20 °C

Further information on storage stability

Keep in a dry place.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

No data available

Personal protective equipment

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type

Filter type P3

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

Skin and body protection

protective clothing

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

powder

Color

yellow

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/ range

230 °C

Decomposition: yes

Boiling point/boiling range

551.67°C (rough estimate)

Flash point

87℃

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Flammability (liquids)

No data available

Burning rate

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

No data available

Relative vapor density

No data available

Relative density

1.4378 (rough estimate)

Density

1.4378 (rough estimate)

Water solubility

slightly soluble (20 °C)

Partition coefficient: n-octanol/water

log Pow: -0.93 (25 °C)

Method: (calculated) Bioaccumulation is not expected.

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

No data available

Oxidizing properties

none

Molecular weight

440.41 g/mol

Particle characteristics Particle size

No data available

Solubility

2 M NaOH: 50 mg/mL

Physical state

powder

SECTION 10: Stability and reactivity

Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability

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

Possibility of hazardous reactions

No data available

Conditions to avoid

Light. no information available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

(in analogy to similar products)

The value is given in analogy to the following substances: methotrexate

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

(in analogy to similar products)

The value is given in analogy to the following substances: methotrexate

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Classified based on available data. For more details, see section 2

Reproductive toxicity

May damage fertility.

May damage the unborn child.

Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

RTECS: MA1050000

Blood disorders, To the best of our knowledge, the chemical, physical, and toxico- logical properties have not been thoroughly investigated.

SECTION 12: Ecological information

Ecotoxicity

Components:

N-[4-[[(2,4-Diamino-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid:

Toxicity to fish

Remarks: No data available

Persistence and degradability

Components:

N-[4-[[(2,4-Diamino-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid:

Biodegradability

Remarks: No data available

Bioaccumulative potential

Components:

N-[4-[[(2,4-Diamino-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid:

Bioaccumulation

Remarks: No data available

Partition coefficient: noctanol/water

log Pow: -0.93 (25 °C) Method: (calculated) Remarks: Bioaccumulation is not expected.

Mobility in soil

Components:

N-[4-[[(2,4-Diamino-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid:

Stability in soil

Remarks: No data available

Other adverse effects

Components:

N-[4-[[(2,4-Diamino-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid:

Additional ecological information

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No. : UN 2811

Proper shipping name : Toxic solid, organic, n.o.s.

(N-[4-[[(2,4-Diamino-6pteridinyl)methyl]amino]benzoyl]-L-glutamic acid)

Class : 6.1

Packing group : I

Labels : Division 6.1 - Toxic substances

Packing instruction (cargo aircraft) : 673

Packing instruction (passenger aircraft) : 666

IMDG-Code

UN number : UN 2811

Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.

(N-[4-[[(2,4-Diamino-6pteridinyl)methyl]amino]benzoyl]-L-glutamic acid)

Class : 6.1

Packing group : I

Labels : 6.1

EmS Code : F-A, S-A

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

JT/T 617

UN number : UN 2811

Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.

(N-[4-[[(2,4-Diamino-6pteridinyl)methyl]amino]benzoyl]-L-glutamic acid)

Class : 6.1

Packing group : I

Labels : 6.1

Environmentally hazardous : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.
Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

National regulatory information

Regulations on Safety Management of Hazardous Chemicals

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

J2 Acute toxic 50 t

Hazardous Chemicals for Priority Management

Not listed under SAWS

Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals

Not listed

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

Not listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number

B1A222225568 B1A122221989

SECTION 16: Other information

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency forTransport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN -Standard of the German Institute for Standardisation

DSL - Domestic SubstancesList (Canada)

ECx - Concentration associated with x% response

ELx - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and NewChemical Substances (Japan)

ErCx - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Can- cer

IATA - International Air Transport Association

IBC - International Code for theConstruction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC50 -Half maximal inhibitory concentration

ICAO - International Civil Aviation Organiza- tion

IECSC - Inventory of Existing Chemical Substances in China

IMDG - Interna- tional Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL -Industrial Safety and Health Law (Japan)

ISO - International Organisation forStandardisation

KECI - Korea Existing Chemicals Inventory

LC50 - Lethal Concen- tration to 50 % of a test population

LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pol- lution from Ships

MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Ef- fect Level

NOELR - No Observable Effect Loading Rate

NOM - Official MexicanNorm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chem- icals

OECD - Organisation for Economic Co-operation and Development

OPPTS - Of- fice of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Sub- stances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning theRegistration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - TaiwanChemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI -Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (UnitedStates)

UN - United Nations

UNRTDG - United Nations Recommendations on theTransport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System