

## Chemical Safety Data Sheet MSDS / SDS

**2-AMINOANTHRAQUINONE**

Revision Date:2024-06-08 Revision Number:1

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

Product name : 2-AMINOANTHRAQUINONE  
CBnumber : CB0437266  
CAS : 117-79-3  
EINECS Number : 204-208-4  
Synonyms : 2-Aminoanthraquinone,AAQ

**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 : 400-158-6606

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Carcinogenicity, Category 2

**Label elements****Pictogram(s)**

Signal word : Warning

**Hazard statement(s)**

H341 Suspected of causing genetic defects

H351 Suspected of causing cancer

**Precautionary statement(s)**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

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

P281 Use personal protective equipment as required.

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

P405 Store locked up.

P501 Dispose of contents/container to.....

#### **Prevention**

P203 Obtain, read and follow all safety instructions before use.

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

#### **Response**

P318 IF exposed or concerned, get medical advice.

#### **Storage**

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: 2-AMINOANTHRAQUINONE
Synonyms	: 2-Aminoanthraquinone,AAQ
CAS	: 117-79-3
EC number	: 204-208-4
MF	: C <sub>14</sub> H <sub>9</sub> NO <sub>2</sub>
MW	: 223.23

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **If inhaled**

Fresh air, rest.

#### **Following skin contact**

Rinse and then wash skin with water and soap.

#### **Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Following ingestion**

Rinse mouth.

### Most important symptoms and effects, both acute and delayed

ACUTE/CHRONIC HAZARDS: This compound may be absorbed through the skin and may cause irritation. It is a positive animal carcinogen.

When heated to decomposition this material emits toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides. (NTP, 1992)

### Indication of any immediate medical attention and special treatment needed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature.

Obtain medical attention. Poisons A and B

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## SECTION 5: Firefighting measures

### Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special protective equipment for fire-fighters: Wear self contained breathing apparatus for fire fighting if necessary.

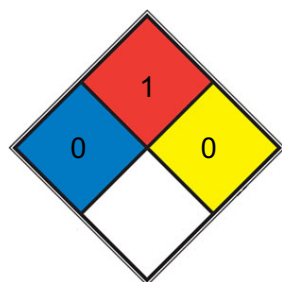
### Specific Hazards Arising from the Chemical

Flash point data for this compound are not available; however, it is probably combustible. (NTP, 1992)

### Advice for firefighters

Use water spray, powder, foam, carbon dioxide.

### NFPA 704



■ HEALTH	0	Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials
■ FIRE	1	Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. <a href="#">mineral oil</a> , ammonia)
■ REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N2</a> )
□ SPEC.		
□ HAZ.		

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

### Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

### Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES. Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Environmental precautions: Do not let product enter drains. Methods for cleaning up: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

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## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

no data available

#### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear safety spectacles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use ventilation (not if powder).

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	PHYSICAL DESCRIPTION: Red needle-like crystals or dark brown granular solid. (NTP, 1992)
Colour	Red needles from alcohol, acetic acid
Odour	no data available
Melting point/freezing point	302°C(lit.)
Boiling point or initial boiling point and boiling range	261°C(lit.)
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	146°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	ethanol: soluble(lit.)
Partition coefficient n-octanol/water	log Kow = 3.31
Vapour pressure	4.12E-09mmHg at 25°C
Density and/or relative density	1.383 g/cm3
Relative vapour density	no data available
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

Decomposes on heating. This produces toxic fumes of nitrogen oxides. Reacts with strong oxidants.

### Chemical stability

no data available

### Possibility of hazardous reactions

Combustible. 2-AMINOANTHRAQUINONE may react with strong oxidizing agents. Forms salts with mineral acids. Can be acylated or alkylated on the nitrogen atom and nitrated or sulphonated in the ring (NTP, 1992).

### Conditions to avoid

no data available

### **Incompatible materials**

Strong oxidizing and/or reducing agents.

### **Hazardous decomposition products**

When heated to decomposition, it emits toxic fumes of nitrogen oxides

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## **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: LD50 Rat oral >3200 mg/kg bw
- Inhalation: no data available
- Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

No data are available in humans. Limited evidence of carcinogenicity in animals. OVERALL EVALUATION: Group 3: The agent is not classifiable as to its carcinogenicity to humans.

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.

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## **SECTION 12: Ecological information**

## Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

## Persistence and degradability

AEROBIC: 2-Aminoanthraquinone, present at 100 mg/L, reached 1% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1).

## Bioaccumulative potential

BCF values of 18-46 and 27-43 were measured in fish for 2-aminoanthraquinone using carp (*Cyprinus carpio*) which were exposed over a 6-week period to test chemical concentrations of 5 and 50 mg/L, respectively(1). According to a classification scheme(3), these BCF ranges suggest the potential for bioconcentration in aquatic organisms is moderate(SRC).

## Mobility in soil

The Koc of 2-aminoanthraquinone is estimated as 4,300(SRC), using a log Kow of 3.31(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that 2-aminoanthraquinone is expected to have slight mobility in soil.

## Other adverse effects

no data available

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# SECTION 13: Disposal considerations

## Disposal methods

### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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# SECTION 14: Transport information

## UN Number

ADR/RID: UN3276 (For reference only, please check.)

IMDG: UN3276 (For reference only, please check.)

IATA: UN3276 (For reference only, please check.)

## UN Proper Shipping Name

ADR/RID: NITRILES, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

IMDG: NITRILES, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

IATA: NITRILES, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## **SECTION 15: Regulatory information**

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Not Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.



## Korea Existing Chemicals List (KECL)

Not Listed.

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Other melting points: 289-292°C.

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.