

## Chemical Safety Data Sheet MSDS / SDS

**FERRIC ARSENIDE**

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

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

Product name : FERRIC ARSENIDE  
CBnumber : CB3762172  
CAS : 12044-16-5  
EINECS Number : 234-947-8  
Synonyms : Iron arsenic;IRON ARSENIDE

**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**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P273 Avoid release to the environment.

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

P264 Wash skin thoroughly after handling.

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

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects

**SECTION 3: Composition/information on ingredients**

## Substance

Product name	: FERRIC ARSENIDE
Synonyms	: Iron arsenic;IRON ARSENIDE
CAS	: 12044-16-5
EC number	: 234-947-8
MF	: AsFe
MW	: 130.77

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## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

### In case of skin contact

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

### In case of eye contact

After eye contact: rinse out with plenty of water. 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

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## SECTION 5: Firefighting measures

### 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.

### **Specific hazards during fire fighting**

Not combustible. Ambient fire may liberate hazardous vapours.

### **Hazardous combustion products**

Iron oxides Arsenic oxides

### **Specific extinguishing methods**

Suppress (knock down) gases/vapors/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.

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## SECTION 6: Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. 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.

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## 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 authorized persons.

#### **Storage class**

6.1C, Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

#### **Recommended storage temperature**

Recommended storage temperature see product label.

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## SECTION 8: Exposure controls/personal protection

### **control parameter**

#### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

#### **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 entrepreneur 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

##### **Hand protection**

###### **Material**

Nitrile rubber

###### **Break through time**

480 min

###### **Glove thickness**

0.11 mm

###### **Protective index**

Full contact

###### **Manufacturer**

KCL 741 L

###### **Material**

Nitrile rubber

###### **Break through time**

480 min

###### **Glove thickness**

0.11 mm

###### **Protective index**

Splash contact

**Manufacturer**

KCL 741 L

**Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Hygiene measures**

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Pieces

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**Color**

gray orthorhombic crystals, crystalline

**Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

1,020 °C

**Boiling point/boiling range**

No data available

**Flash point**

Not applicable

**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**

7.83 g/cm<sup>3</sup> at 25 °C

**Density**

7.83 g/cm<sup>3</sup> (25 °C)

**Water solubility**

slightly soluble

**Partition coefficient: n-octanol/water**

No data available

**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**

No data available

### **Molecular weight**

130.77 g/mol

### **Particle characteristics Particle size**

No data available

### **Physical state**

gray orthorhombic crystals

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## SECTION 10: Stability and reactivity

### **Reactivity**

No data available

### **Chemical stability**

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

### **Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

no information available

### **Incompatible materials**

Strong oxidizing agents

### **Hazardous decomposition products**

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

Oral: No data available

LC50 Inhalation - 4 h - 0.51 mg/l - dust/mist (Acute toxicity estimate)

Dermal: No data available

#### **Skin corrosion/irritation**

Remarks: No data available

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

Remarks: No data available

#### **Respiratory or skin sensitization**

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

**Germ cell mutagenicity**

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

**Carcinogenicity**

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

**Reproductive toxicity**

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

**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**

May cause convulsions., Benign pneumoconiosis., Ulceration, Gastrointestinal disturbance, Depigmentation of skin and hair., Dermatitis, Bronchitis., Shock., Lowered blood pressure, Anorexia.

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## SECTION 12: Ecological information

**Ecotoxicity**

**Components:**

**Iron (III) arsenide:**

**Toxicity to fish**

Remarks: No data available

**M-Factor (Acute aquatic toxicity)**

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**Persistence and degradability**

**Components:**

**Iron (III) arsenide:**

**Biodegradability**

Remarks: No data available

**Bioaccumulative potential**

**Components:**

**Iron (III) arsenide:**

**Bioaccumulation**

Remarks: No data available

## **Mobility in soil**

### **Components:**

#### **Iron (III) arsenide:**

##### **Stability in soil**

Remarks: No data available

##### **Other adverse effects**

No data available

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## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Waste from residues**

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

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## **SECTION 14: Transport information**

### **International Regulations**

#### **IATA-DGR**

UN/ID No. : UN 1557

Proper shipping name : Arsenic compound, solid, n.o.s.

(Iron (III) arsenide)

Class : 6.1

Packing group : III

Labels : Division 6.1 - Toxic substances

Packing instruction (cargo aircraft) : 677

Packing instruction (passenger aircraft) : 670

#### **IMDG-Code**

UN number : UN 1557

Proper shipping name : ARSENIC COMPOUND, SOLID, N.O.S.

(Iron (III) arsenide)

Class : 6.1

Packing group : III

Labels : 6.1

EmS Code : F-A, S-A

Marine pollutant : yes

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

Not applicable for product as supplied.

National regulation GB 6944/12268

UN number : UN 1557

Proper shipping name : ARSENIC COMPOUND, SOLID, N.O.S.

(Iron (III) arsenide)

Class : 6.1

Packing group : III

Labels : 6.1

### **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.

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## **SECTION 15: Regulatory information**

### **National regulatory information**

#### **Law on the Prevention and Control of Occupational Diseases**

#### **Regulations on Safety Management of Hazardous Chemicals**

#### **Catalogue of Hazardous Chemicals**

Not applicable

#### **Hazardous Chemicals for Priority Management**

Not applicable under SAWS

#### **Regulations on Occupational Labor Protection in the at workplaces where**

#### **Toxic Substances Are Used**

#### **Catalogue of Highly Toxic Chemicals**

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 applicable

#### **Regulation on the Administration of Precursor Chemicals**

#### **Catalogue and Classification of Precursor Chemicals**

Not listed

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## SECTION 16: Other information

### Full text of other abbreviations

#### ACGIH

USA. ACGIH Threshold Limit Values (TLV)

#### GBZ 2.1-2007

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

#### ACGIH / TWA

8-hour, time-weighted average

#### GBZ 2.1-2007 / PC-TWA

Permissible concentration - time weighted average

**GBZ 2.1-2007 / PC-STEL** AIC - Australian Invent Transport by Land of Bra bw - Body weight; **CMR** Standard of the German List (Canada); **ECx** - Conc associated with x% respo Chemical Substances (Jap response; **ERG** - Emerge **GLP** - Good Laboratory P cer; **IATA** - International Construction and Equipm Half maximal inhibitory c tion; **IECSC** - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; **KECI** - K tration to 50 % of a test (Median Lethal Dose); **MA** lution from Ships; **n.o.s.** No Observed (Adverse) E fect Level; **NOELR** - No Norm; **NTP** - National Toxi icals; **OECD** - Organizatio fice of Chemical Safety a and Toxic substance; **PIC** stances; **(Q)SAR** - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemical States); **UN** - United Nat Transport of Dangerous **WHMIS** - Workplace Hazar

Permissible concentration - short term exposure limit ry of Industrial Chemicals

**ANTT** - National Agency for il

**ASTM** - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

**DIN** nstitute for Standardisation

**DSL** - Domestic Substances ntration associated with x% response

**ELx** - Loading rate se

**EmS** - Emergency Schedule

**ENCS** - Existing and New n)

**ErCx** - Concentration associated with x% growth rate cy Response Guide

**GHS** - Globally Harmonized System

actice

**IARC** - International Agency for Research on Canir Transport Association

**IBC** - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

**IC50** ncentration

**ICAO** - International Civil Aviation Organiza- Existing Chemical Substances in China

**IMDG** - Interna- Goods

**IMO** - International Maritime Organization

**ISHL** alth Law (Japan)

**ISO** - International Organisation for rea Existing Chemicals Inventory

**LC50** - Lethal Concenopulation

**LD50** - Lethal Dose to 50% of a test population **POL** - International Convention for the Prevention of Pol- Not Otherwise Specified

**Nch** - Chilean Norm

**NO(A)EC** fect Concentration

NO(A)EL - No Observed (Adverse) Ebservable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

**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.