

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.1 Revision Date 30.11.2011

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifiers**

Product name : Hemin

Product Number : H9039

Brand : Sigma

CAS-No. : 16009-13-5

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

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Pte Ltd  
1 Science Park Road  
#02-14 The Capricorn  
Singapore Science Park Road II  
SINGAPORE 117528  
SINGAPORE

Telephone : +65 6779 1200

Fax : +65 6779 1822

**1.4 Emergency telephone number**

Emergency Phone # : 1-800-262-8200

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**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.  
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

**2.2 Label elements**

The product does not need to be labelled in accordance with EC directives or respective national laws.

**2.3 Other hazards**

Possible sensitizer.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Synonyms : Ferriprotoporphyrin IX chloride  
Chloro(protoporphyrinato)iron(III)  
Chlorohemin  
Hemin(chloride)  
Chloroprotoporphyrin IX iron(III)

Formula :  $C_{34}H_{32}ClFeN_4O_4$

Molecular Weight : 651,94 g/mol

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#### **4. FIRST AID MEASURES**

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

###### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

###### **In case of skin contact**

Wash off with soap and plenty of water.

###### **In case of eye contact**

Flush eyes with water as a precaution.

###### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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

no data available

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#### **5. FIREFIGHTING MEASURES**

##### **5.1 Extinguishing media**

###### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas, Iron oxides

##### **5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

##### **5.4 Further information**

no data available

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#### **6. ACCIDENTAL RELEASE MEASURES**

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

Avoid dust formation. Avoid breathing vapors, mist or gas.

##### **6.2 Environmental precautions**

Do not let product enter drains.

##### **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Keep in suitable, closed containers for disposal.

##### **6.4 Reference to other sections**

For disposal see section 13.

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#### **7. HANDLING AND STORAGE**

##### **7.1 Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.

##### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

Keep in a dry place.

##### **7.3 Specific end uses**

no data available

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

General industrial hygiene practice.

#### Personal protective equipment

##### Eye/face protection

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

##### Skin protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: powder Colour: dark blue
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available

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|---|-------------------|
| o) Partition coefficient: n-octanol/water | no data available |
| p) Autoignition temperature               | no data available |
| q) Decomposition temperature              | no data available |
| r) Viscosity                              | no data available |
| s) Explosive properties                   | no data available |
| t) Oxidizing properties                   | no data available |

## 9.2 Other safety information

Bulk density	500 g/l
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

no data available

#### Specific target organ toxicity - single exposure

no data available

#### Specific target organ toxicity - repeated exposure

no data available

**Aspiration hazard**

no data available

**Potential health effects****Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion**

May be harmful if swallowed.

**Skin**

May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**

May cause eye irritation.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

no data available

**12.6 Other adverse effects**

no data available

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

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

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****14.1 UN number**

ADR/RID: -

IMDG: -

IATA: -

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

**14.4 Packaging group**

ADR/RID: -

IMDG: -

IATA: -

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

no data available

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**15. REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
no data available**15.2 Chemical Safety Assessment**  
no data available

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**16. OTHER INFORMATION****Further information**

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