



**MATERIAL SAFETY DATA SHEET(MSDS) IRON SULPHATE HEPTAHYDRATE**

**1. Product Identification**

**Synonyms:** Ferrous Sulphate Heptahydrate, IRON SULPHATE Hepta.  
**REACH:** 01-2119513203-57-XXXX  
**EC Number:** 231-753-5  
**CAS Number:** 7782-63-0  
**Molecular Weight:** 278 g/mol  
**Chemical Formula:** FeSO<sub>4</sub> 7H<sub>2</sub>O

**1.2 Relevant Identified Usage of the Substance or Mixture**

Industrial use  
Fertiliser

**2. Supplier of Safety Data Sheet**

CMI Limited  
Mill Lodge, 23 Gainsborough Road  
Winthorpe  
Newark  
Nottinghamshire  
NG24 2NN

Emergency Contact Number: +44 (0) 1636 892078 (office hours only)

**3. Composition/Information on Ingredients**

Identifiers	Name	Concentrate	(*) Classification – Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 026-003-01-4 CAS No: 7782-63-0 EC No: 231-753-5	Iron (II) sulfate (1:1) heptahydrate, sulfuric acid, iron (II) salt (1:1), heptahydrate, ferrous sulfate heptahydrate	25-100%	Acute Tox. 4 *, H302 – Eye Irrit, 2, H319 – Skin irrit. 2, H315	Skin Irrit. 2, H314: C ≥ 25%

**4. Hazards Identification**

Classification of the substance or mixture

Classification (EC 1272/2008)

**Physical hazards:** Not classified

**Health hazards:** Acute Tox. 4 – H302 Skin Irrit. 2 – H315 Eye Irrit. 2 –H319

**Environmental hazards:** Not classified

**Label elements**

**EC number** 231-753-5

**Pictogram:**



**Signal word:** Warning

**Hazard statements:** H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation

**Precautionary statements:** P280 Wear protective gloves/protective clothing/eye protection/face protection  
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell  
P302+P352 IF ON SKIN Wash with plenty of water  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.

#### **Supplementary precautionary**

**Statements:** P264 Wash contaminated skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P321 Specific treatment (see medical advice on this label).  
P330 Rinse mouth.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P501 Dispose of contents/container in accordance with national regulations.

#### **Other hazards**

This substance is not classified as PBT or vPvB according to current EU criteria. Substance does not have endocrine disrupting properties. In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

#### **Emergency Overview**

WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED.

#### **Potential Health Effects**

**Inhalation:** Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.  
**Ingestion:** Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. It presents little toxicity unless large amounts are ingested, in which case, vomiting and diarrhea are likely.  
**Skin Contact:** Causes irritation to skin. Symptoms include redness, itching, and pain.  
**Eye Contact:** Causes irritation, redness, and pain.  
**Chronic Exposure:** No information found.  
**Aggravation of Pre-existing Conditions:** No information found.

#### **5. First Aid Measures**

**IRRITANT MIXTURE:** Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.  
**Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. NEVER induce vomiting.  
**Skin Contact:** Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.  
**Eye Contact:** Remove contact lenses, if present and easy to do. Immediately flush eyes with plenty of clean and cool water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention. Don't let the person rub the affected eye.

##### **5.2. Most important symptoms and effects, both acute and delayed.**

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate.

Repeated or prolonged eye contact may cause stinging, tearing, redness, swelling, and blurred vision.

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

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

In case of doubt or when symptoms of feeling persist, get medical attention. Never administer anything orally to persons who are unconscious. Do not induce vomiting. If the person vomits, clear the respiratory tract.

## **6. Fire Fighting Measures**

The product is NOT classified as flammable, in case of fire the following measures should be taken:

### **6.1 Extinguishing media**

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

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray.

#### **Unsuitable extinguishing media:**

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

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

#### **Special risks**

Exposure to combustion or decomposition products can be harmful to your health.

### **6.3 Advice to firefighters**

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

#### **Fire protection equipment**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

## **7. Accidental Release Measures**

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

For exposure control and individual protection measures, see section 9.

### **7.2 Environmental precautions**

Product not classified as hazardous for the environment, avoid spillage as much as possible.

### **7.3 Methods and material for containment and cleaning up**

Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 14).

### **7.4 Reference to other sections**

For exposure control and individual protection measures, see section 9.

**For later elimination of waste, follow the recommendations under section 14.**

## **8. Handling and Storage**

### **8.1 Precautions for safe handling**

For personal protection, see section 9.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

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

Iron Sulphate is very hygroscopic and will absorb water on contact with moisture in the air. Store in a tightly closed, original container in a cool, dry and well-ventilated environment, with store temperatures not exceeding 24°C according to local legislation. Observe indications on the label. Protect against physical damage. Keep far away from ignition points. Isolate from incompatible substances with strong oxidising agents, alkalis, soluble carbonates. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

## 9. Exposure Controls/Personal Protection

### 9.1 Control parameters

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

### 9.2 Exposure controls

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	100 %	
Uses:	Industrial generic Fertilizer	
<b>Breathing protection:</b>		
PPE:	Particle filter mask	
Characteristics:	<<CE>> marking, category III. Made of filtering material, it covers nose, mouth and chin.	
CEN standards:	EN 149	
Maintenance:	Check for any tears, defects, etc. before use. Since it is disposable individual protection equipment, it should be replaced after use.	
Observations:	Does not protect worker unless properly adjusted. Follow the manufacturer's instructions regarding suitable use of the equipment.	
Filter Type needed:	P2	
<b>Hand protection:</b>		
PPE:	Protective gloves against chemicals.	
Characteristics:	<<CE>> marking, category III.	
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420	
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible.	
Observations:	Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives. Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.	
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.): > 480
		Material thickness (mm): 0.35
<b>Eye protection:</b>		
PPE:	Protective goggles against particle impacts.	
Characteristics:	<<CE>> marking, category II. Eye protector against dust and smoke.	
CEN standards:	EN 165, EN 166, EN 167, EN 168	
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.	
Observations:	Some signs of wear and tear include yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.	
<b>Skin protection:</b>		
PPE:	Protective clothing.	
Characteristics:	<<CE>> marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.	
CEN standards:	EN 340	
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.	
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.	
PPE:	Work footwear.	
Characteristics:	<<CE>> marking, category II.	



CEN standards:	EN ISO 13287, EN 20347
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident

## **10. Physical and Chemical Properties**

<b>Appearance:</b>	Light green solid.
<b>Odour:</b>	Odourless
<b>Solubility:</b>	Soluble in water.
<b>Relative Density:</b>	1.89 g/cm <sup>3</sup>
<b>pH:</b>	3-4 (50%)
<b>Boiling Point:</b>	300°C

**This item absorbs water.**

## **11. Stability and Reactivity**

### **11.1 Reactivity**

The product does not present hazards by their reactivity.

### **11.2 Chemical stability**

Stable under the recommended handling and storage conditions (see section 8).

### **11.3 Possibility of hazardous reactions**

The product does not present possibility of hazardous reactions.

### **11.4 Conditions to avoid**

Avoid any improper handling.

### **11.5 Incompatible materials**

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

### **11.6 Hazardous decomposition products**

No decomposition if used for the intended uses.

## **12. Toxicological Information**

IRRITANT MIXTURE. Splashes in the eyes can cause irritation.

IRRITANT MIXTURE. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

### **12.1 Information on hazard classes as defined in Regulation (EC) N° 1272/2008**

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

#### **Toxicological information**

Ingredient	Type	Test	Kind	Value
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Ferrous Sulphate Hepta (7782-63-0)	Oral	LD50	Rat	1480 mg/kg

#### a) Acute toxicity

Product classified: Acute toxicity (Oral), Category 4: Harmful if swallowed

Acute Toxicity Estimate (ATE):

Substances:

ATE (Oral) = 500 mg/kg

#### b) Skin corrosion/irritation

Product classified: Skin irritant, Category 2: Causes skin irritation

- c) Serious eye damage/irritation  
Product classified: Eye irritation, Category 2: Causes serious eye irritation
- d) Respiratory or skin sensitisation  
Not conclusive date for classification
- e) Germ cell mutagenicity  
Not conclusive date for classification
- f) Carcinogenicity  
Not conclusive date for classification
- g) Reproductive toxicity  
Not conclusive date for classification
- h) STOT-single exposure  
Not conclusive date for classification
- i) STOT-repeated exposure  
Not conclusive date for classification
- j) Aspiration hazard  
Not conclusive date for classification

## **12.2 Information on other hazards**

### **Endocrine disrupting properties**

This product does not contain components with endocrine-disrupting properties with effects on human health.

### **Other information**

There is no information available on other adverse health effects.

## **13. Ecological Information**

### **13.1 Toxicity**

No information is available regarding the ecotoxicity.

### **13.2 Persistence and degradability**

No information is available regarding the biodegradability

No information is available on the degradability

No information is available about persistence and degradability of the product.

### **13.3 Bioaccumulative potential**

No information is available regarding the bioaccumulation.

### **13.4 Mobility in soil**

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

### **13.5 Results of PBT and vPvB assessment**

No information is available about the results of PBT and vPvB assessment of the product.

### **13.6 Endocrine disrupting properties**

This product doesn't contain components with environmental endocrine disrupting properties.

### **13.7 Other adverse effects**

The product is not affected by the Regulation (EU) 2024/590 of the European Parliament and of the Council of 7 February 2024 on substances that deplete the ozone layer.

No information is available about other adverse effects for the environment.

#### **14. Disposal Considerations**

Do not dispose of into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local and national legislation. Follow the provisions of Directive 2008/98/EC regarding waste management.

#### **15. Transport Information**

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 7.

##### **15.1 UN number or ID number**

Transportation is not dangerous.

##### **15.2 UN proper shipping name**

###### **Description:**

ADR/RID: Not classified as hazardous for transport.

IMDG: Not classified as hazardous for transport.

ICAO/IATA: Not classified as hazardous for transport.

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

Transportation is not dangerous.

##### **15.4 Packing group**

Transportation is not dangerous.

##### **15.5 Environmental hazards**

Transportation is not dangerous.

Transport by ship, FEm 3 Emergency sheets (F 3 Fire, S - Spills): Not applicable.

##### **15.6 Special precautions for user**

Transportation is not dangerous.

##### **15.7 Maritime transport in bulk according to IMO instruments**

Transportation is not dangerous.

#### **16. Regulatory Information**

##### **16.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

The product is not affected by Directive 2012/18/EU (SEVESO III).

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Kind of pollutant to water (Germany): WGK 1: Slightly hazardous to water. (Autoclassified according to the AwSV Regulations)

##### **16.2 Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Available Product Exposure Scenario.

#### **17. Other Information**

##### **Classification codes:**

Acute Tox. 4: Acute toxicity (Oral), Category 4

Eye Irrit. 2: Eye irritation, Category 2

Skin Irrit. 2: Skin irritant, Category 2

Changes regarding to the previous version:

- Change in the hazard classification (SECTION 12.1)

##### **Classification and procedure used to derive the classification for mixtures according to Regulation (EC)**

###### **1272/2008 [CLP]:**

Physical hazards                      On basis of test data

Health hazards            Calculation method  
Environmental hazards    Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Available Product Exposure Scenario.

Abbreviations and acronyms used:

AwSV: Facility Regulations for handling substances that are hazardous for the water.

CEN: European Committee for Standardization.

PPE: Personal protection equipment.

WGK: Water hazard classes.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.