

## SAFETY DATA SHEET

## Ferrous sulphate, 30%

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

## 1.1. Product identifier

## ▼ Trade name

Ferrous sulphate, 30%

## Other names / Synonyms

Iron (II) sulfate

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

## Relevant identified uses of the substance or mixture

Agrochemical uses, Manufacture of substance, Treatment of drinking water, European Committee Approval , Food Additive

## Uses advised against

None known.

## 1.3. Details of the supplier of the safety data sheet

## Company and address

**Industrial Chemicals Limited**

Hogg Lane, Grays

RM17 5DU Essex

United Kingdom

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+44 (0)1375 389110

www.icgl.co.uk

## E-mail

sds@icgl.co.uk

## Revision

17/03/2023

## SDS Version

3.0

## Date of previous version

13/03/2023 (2.0)

## 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

## SECTION 2: Hazards identification

## 2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Irrit. 2; H319, Causes serious eye irritation.

## 2.2. Label elements

## Hazard pictogram(s)



## Signal word

Warning

## Hazard statement(s)

Harmful if swallowed. (H302)

Causes skin irritation. (H315)

Causes serious eye irritation. (H319)

## Safety statement(s)

## General

-

## Prevention

Wash hands thoroughly after handling. (P264)

Wear face protection/protective gloves/protective clothing. (P280)

## Response

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. (P301+P312)

Rinse mouth. (P330)

If eye irritation persists: Get medical advice/attention. (P337+P313)

## Storage

-

## Disposal

Dispose of contents/container in accordance with local regulation. (P501)

## Hazardous substances

iron (II) sulfate (1:1) heptahydrate;sulfuric acid, iron(II) salt (1:1), heptahydrate;ferrous sulfate heptahydrate

## Additional labelling

Not applicable.

## 2.3. Other hazards

### Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
iron (II) sulfate (1:1) heptahydrate;sulfuric acid, iron(II) salt (1:1), heptahydrate;ferrous sulfate heptahydrate	CAS No.: 7782-63-0 EC No.: 231-753-5 UK-REACH: 01-1016512107-9-0002 Index No.: 026-003-01-4	25-40%	Acute Tox. 4, H302 Skin Irrit. 2, H315 (SCL: 25.00 %) Eye Irrit. 2, H319	
sulphuric acid ... %	CAS No.: 7664-93-9 EC No.: 231-639-5 UK-REACH: 20-5418564336-5-0000 Index No.: 016-020-00-8	1-3%	Skin Corr. 1A, H314	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

## Other information

[1] European occupational exposure limit.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### Skin contact

IF ON SKIN: Wash with plenty of water and soap.

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

#### Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

#### Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

#### Burns

Not applicable.

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

Some metal oxides

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

### SECTION 6: Accidental release measures

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

Avoid direct contact with spilled substances.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

#### 6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

##### Recommended storage material

Always store in containers of the same material as the original container.

##### Storage temperature

Tightly closed. Dry

Dry, cool and well ventilated

**Incompatible materials**

- Alkali
- Strong oxidizing agents
- Heat

**7.3. Specific end use(s)**

This product should only be used for applications quoted in section 1.2.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

sulphuric acid ... %  
 Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0.05

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

**DNEL**

No data available.

**PNEC**

No data available.

**8.2. Exposure controls**

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

**General recommendations**

Smoking, drinking and consumption of food is not allowed in the work area.

**Exposure scenarios**

There are no exposure scenarios implemented for this product.

**Exposure limits**

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

**Appropriate technical measures**

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

**Hygiene measures**

Take off contaminated clothing and wash it before reuse.

**Measures to avoid environmental exposure**

No specific requirements.

**Individual protection measures, such as personal protective equipment**

**Generally**

Use only UKCA marked protective equipment.

**Respiratory Equipment**

No specific requirements

**Skin protection**

Recommended	Type/Category	Standards
Chemical suit, PVC		



**Hand protection**

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.			

**Eye protection**

Type	Standards
Chemical splash goggles	
Face shield	EN166



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

#### Colour

Green

#### Odour / Odour threshold

Acidic

#### pH

Testing not relevant or not possible due to the nature of the product.

#### pH in solution

(2-3%)

#### Density (g/cm<sup>3</sup>)

Testing not relevant or not possible due to the nature of the product.

#### Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

##### Melting point/Freezing point (°C)

Testing not relevant or not possible due to the nature of the product.

##### Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

##### Boiling point (°C)

Testing not relevant or not possible due to the nature of the product.

##### Vapour pressure

Testing not relevant or not possible due to the nature of the product.

##### Relative vapour density

Testing not relevant or not possible due to the nature of the product.

##### Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

#### Data on fire and explosion hazards

##### Flash point (°C)

Testing not relevant or not possible due to the nature of the product.

##### Flammability (°C)

Testing not relevant or not possible due to the nature of the product.

##### Auto-ignition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

##### Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

#### Solubility

##### Solubility in water

Testing not relevant or not possible due to the nature of the product.

##### n-octanol/water coefficient

Testing not relevant or not possible due to the nature of the product.

##### Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

### 9.2. Other information

#### Sensitivity to shock

The following materials may react with the product: Oxidising materials

**Sensitivity to impact**

Reacts with strong oxidising agents

**Thermal stability**

Air. Oxidising materials. Light. Avoid contact with alkalis. Heat

**Decomposition temperature (Self-reactive substances and mixtures) (°C)**

Oxides of the following substances: Sulphur

**Explosive power**

Not considered to be oxidising

**Other physical and chemical parameters**

Avoid heat. Avoid contact with the following materials: Strong oxidising agents

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

The product is stable under the conditions, noted in section 7 "Handling and storage".

**10.3. Possibility of hazardous reactions**

None known.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

Alkali

Strong oxidizing agents

Heat

**10.6. Hazardous decomposition products**

The product is not degraded when used as specified in section 1.

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law**

**Acute toxicity**

Harmful if swallowed.

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory sensitisation**

Based on available data, the classification criteria are not met.

**Skin sensitisation**

Based on available data, the classification criteria are not met.

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**11.2. Information on other hazards**

**Long term effects**

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

**Endocrine disrupting properties**

Not applicable.

**Other information**

sulphuric acid ... % has been classified by IARC as a group 1 carcinogen.

## SECTION 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

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### 12.6. Endocrine disrupting properties

Not applicable.

### 12.7. Other adverse effects

None known.

## SECTION 13: Disposal considerations

### Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 6 - Acute toxicity

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### EWC code

Not applicable.

### Specific labelling

Not applicable.

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	<b>14.1 UN / ID</b>	<b>14.2 UN proper shipping name</b>	<b>14.3 Hazard class(es)</b>	<b>14.4 PG*</b>	<b>14.5 Env**</b>	<b>Other information:</b>
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

### Additional information

Not dangerous goods according to ADR, IATA and IMDG.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Restrictions for application

Restricted to professional users.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

Not applicable.

#### Regulation on drug precursors

sulphuric acid ... % is included (Category 3)

#### Regulation on explosives precursors

sulphuric acid ... % (Annex I)

#### Additional information

Not applicable.

#### Sources

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

The Controlled Drugs (Drug Precursors) Regulations 2008.

Council Regulation (EC) No 2019/1148 on explosives precursors as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.

H319, Causes serious eye irritation.

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

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

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations



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UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

#### ▼ The safety data sheet is validated by

R Williams

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en