



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 14.07.2018

Version 12.3

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

### 1.1 Product identifier

Catalogue No.	1.2290
Product name	Iron(II) sulfate heptahydrate cryst., EMPROVE <sup>®</sup> ESSENTIAL Ph Eur,BP,USP,FCC
REACH Registration Number	01-2119513203-57-XXXX
CAS-No.	7782-63-0

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

Identified uses	Pharmaceutical production For additional information on uses please refer to the Neutron Pharma Chemicals portal ( <a href="http://www.Neutronpharmachemical.com">www.Neutronpharmachemical.com</a> ).
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### 1.3 Details of the supplier of the safety data sheet

Company	NEUTRON PHARMACHEMICAL CO 98, 9th Floor, Borjsaz Building, Azadi Ave, Tehran, Iran. T 021-66906732-3 - F 021-66581408
72-0 Responsible Department	<a href="mailto:info@neutronpharmachemical.com">info@neutronpharmachemical.com</a> - <a href="http://www.neutronpharmachemical.com">www.neutronpharmachemical.com</a>

### 1.4 Emergency telephone number

Please contact the regional company representation in your country.

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## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4, Oral, H302

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	1.2290
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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

#### *Hazard pictograms*



#### *Signal word*

Warning

#### *Hazard statements*

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

#### *Precautionary statements*

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

#### **Reduced labelling (≤125 ml)**

#### *Hazard pictograms*



#### *Signal word*

Warning

*Index-No.* 026-003-00-7

## 2.3 Other hazards

None known.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 1.2290  
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Eur,BP,USP,FCC

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	FeSO <sub>4</sub> * 7H <sub>2</sub> O	FeO <sub>4</sub> S * 7H <sub>2</sub> O (Hill)
Index-No.	026-003-00-7	
EC-No.	231-753-5	
Molar mass	278,02 g/mol	

### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

CAS-No.	Registration number	Classification
Iron(II) sulphate heptahydrate (>= 80 % - <= 100 % )		
7782-63-0	01-2119513203-57-XXXX	Acute toxicity, Category 4, H302 Skin irritation, Category 2, H315 Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

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

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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Catalogue No.	1.2290
Product name	Iron(II) sulfate heptahydrate cryst., EMPROVE® ESSENTIAL Ph Eur,BP,USP,FCC

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

Diarrhoea, Bloody vomiting

The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.

irritant effects

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*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.

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

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Sulphur oxides

### 5.3 Advice for firefighters

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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

#### *Storage conditions*

Protected from light.

Tightly closed. Dry.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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Recommended storage temperature see product label.

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### *Eye/face protection*

Safety glasses

#### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

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# SAFETY DATA SHEET

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---

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

#### *Other protective equipment*

protective clothing

#### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter B-(P2)

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.

#### **Environmental exposure controls**

Do not let product enter drains.

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## **SECTION 9. Physical and chemical properties**

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

Form	solid
Colour	blue green
Odour	odourless
Odour Threshold	Not applicable

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pH 3 - 4  
at 50 g/l  
20 °C

Melting point > 60 °C  
Elimination of water of crystallisation

Boiling point No information available.

Flash point does not flash

Evaporation rate No information available.

Flammability (solid, gas) No information available.

Lower explosion limit Not applicable

Upper explosion limit Not applicable

Vapour pressure No information available.

Relative vapour density No information available.

Density 1,89 g/cm<sup>3</sup>  
at 20 °C

Relative density No information available.

Water solubility ca.400 g/l  
at 20 °C

Partition coefficient: n-  
octanol/water No information available.

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Auto-ignition temperature	No information available.
Decomposition temperature	> 300 °C
Viscosity, dynamic	Not applicable
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Ignition temperature	not combustible
Bulk density	ca.600 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

Sensitivity to light  
releases water of crystallisation when heated.

### 10.3 Possibility of hazardous reactions

increased reactivity with:  
Bases, Oxidizing agents

### 10.4 Conditions to avoid

Exposure to moisture

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: 319 mg/kg

(anhydrous substance) (Lit.)

absorption

#### *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

#### *Acute dermal toxicity*

This information is not available.

#### *Skin irritation*

Causes skin irritation.

#### *Eye irritation*

Causes serious eye irritation.

#### *Sensitisation*

In animal experiments:

Result: negative

(IUCLID)

#### *Germ cell mutagenicity*

#### *Genotoxicity in vitro*

Ames test

Result: negative

(Lit.)

# SAFETY DATA SHEET

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## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## **11.2 Further information**

Systemic effects:

After swallowing of large amounts:

Bloody vomiting, Diarrhoea, drop in blood pressure

The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12. Ecological information**

### **12.1 Toxicity**

#### *Toxicity to fish*

LC50 *Poecilia reticulata* (guppy): 925 mg/l; 96 h

(IUCLID)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 152 mg/l; 48 h

(anhydrous substance) (IUCLID)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 1.2290  
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---

## *Toxicity to bacteria*

EC0 Pseudomonas fluorescens: 100 mg/l; 24 h  
(anhydrous substance) (IUCLID)

### **12.2 Persistence and degradability**

No information available.

### **12.3 Bioaccumulative potential**

No information available.

### **12.4 Mobility in soil**

No information available.

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### **12.6 Other adverse effects**

#### *Additional ecological information*

Discharge into the environment must be avoided.

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## **SECTION 13. Disposal considerations**

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## **SECTION 14. Transport information**

### **Land transport (ADR/RID)**

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### **Inland waterway transport (ADN)**

Not relevant

### **Air transport (IATA)**

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### **Sea transport (IMDG)**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	1.2290
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**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

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

Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard	SEVESO III
Legislation	Not applicable

Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.
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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	not regulated
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Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC	not regulated
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Substances of very high concern (SVHC)	This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of $\geq 0.1$ % (w/w).
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#### *National legislation*

Storage class	10 - 13
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### 15.2 Chemical safety assessment

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according to Regulation (EC) No. 1907/2006

Catalogue No. 1.2290  
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Eur,BP,USP,FCC

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For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

*Precautionary statements*

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.  
P313 Get medical advice/ attention.

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## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*