

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

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Version number 10.04 (replaces version 10.03)

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

· **1.1 Product identifier**

· **Trade name:** iron(II) sulfate 7-hydrate

· **Article number:** 1362

· **CAS Number:**

7782-63-0

· **EC number:**

231-753-5

· **Index number:**

026-003-01-4

· **Registration number** 01-2119513203-57-XXXX

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

· **Sector of Use**

SU1 Agriculture, forestry, fishery

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU14 Manufacture of basic metals, including alloys

· **Product category**

PC9a Coatings and paints, thinners, paint removers

PC9b Fillers, putties, plasters, modelling clay

PC12 Fertilisers

PC14 Metal surface treatment products

PC15 Non-metal-surface treatment products

PC18 Ink and toners

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC27 Plant protection products

PC37 Water treatment chemicals

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

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- PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC11 Non industrial spraying
- PROC13 Treatment of articles by dipping and pouring
- PROC14 Tableting, compression, extrusion, pelletisation, granulation
- PROC15 Use as laboratory reagent
- PROC22 Manufacturing and processing of minerals and/or metals at substantially elevated temperature
- PROC26 Handling of solid inorganic substances at ambient temperature

- **Environmental release category**

- ERC1 Manufacture of the substance
- ERC2 Formulation into mixture
- ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- ERC5 Use at industrial site leading to inclusion into/onto article
- ERC6a Use of intermediate
- ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
- ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
- ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

- **Application of the substance / the mixture** Laboratory chemicals

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

- **Manufacturer/Supplier:**

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès (Barcelona)

Tel. (+34) 937 489 400

Fax. (+34) 937 489 401

e-mail: product.safety@itwreagents.com

- **Further information obtainable from:** email: product.safety@panreac.com

- **1.4 Emergency telephone number:**

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**

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**

- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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Trade name: iron(II) sulfate 7-hydrate

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· **Precautionary statements**

P264 Wash thoroughly after handling.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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

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

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**

7782-63-0 ferrous sulfate heptahydrate

· **Identification number(s)**

· **EC number:** 231-753-5

· **Index number:** 026-003-01-4

· **Specific concentration limits** Skin Irrit. 2; H315: C ≥ 25 %

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Involve doctor immediately.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Call a doctor immediately.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:** Call a doctor immediately.

· **After swallowing:**

make victim drink water (maximum of 2 drinking glasses)

Call a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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

In case of fire, the following can be released:

Sulphur oxides (SO_x)

Carbon monoxide (CO)

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Non-combustible.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

· **Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

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

Avoid formation of dust.

Avoid substance contact.

Ensure adequate ventilation

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Avoid formation of dust.

Dispose contaminated material as waste according to section 13.

Clean up affected area.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Any unavoidable deposit of dust must be regularly removed.

· **Information about fire - and explosion protection:** The product is not flammable.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:**

Keep container tightly sealed.

Open receptacle only under localised extractor facilities.

Store under lock and key and with access restricted to technical experts or their assistants only.

· **Recommended storage temperature:** Room Temperature

· **Storage class:** 13

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **DNELs**

Oral	Long-term - systemic effects, general population	0.29 mg/kg
Dermal	Long-term - systemic effects, worker	0.57 mg/kg
	Long term - systemic effects, general population	0.29 mg/kg

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Inhalative	Long-term - systemic effects, worker	2.01 mg/m ³
	Long-term - systemic effects, general population	0.5 mg/m ³

· **PNECs**

Aquatic compartment - sediment in freshwater	49.5 mg/kg
Terrestrial compartment - soil	55 mg/kg
Sewage treatment plant	500 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Vacuum clean contaminated clothing. Do not blow or brush off contamination.
 Avoid contact with the eyes and skin.

· **Respiratory protection:**

Filter P2
 Required when dusts are generated.

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR
 Recommended thickness of the material: ≥ 0.11 mm
 Value for the permeation: Level ≥ 480 min

· **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR
 Recommended thickness of the material: ≥ 0.11 mm
 Value for the permeation: Level ≥ 480 min

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Use protective suit.

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SECTION 9: Physical and chemical properties**· 9.1 Information on basic physical and chemical properties****· General Information**

· Physical state	Solid
· Colour:	blue green
· Odour:	Odourless
· Odour threshold:	Not determined.
· Melting point/freezing point:	64 °C
· Boiling point or initial boiling point and boiling range	Undetermined.
· Flammability	Product is not flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	>300 °C >300 °C
· pH	3-4
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 20 °C:	400 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	1.897 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	See section 3.

· 9.2 Other information

· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	278.02 g/mol
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void

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- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Moisture
- **10.3 Possibility of hazardous reactions**
 Reacts with oxidising agents.
 Reacts with alkali (lyes).
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**
 Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
Oral LD50		1,520 mg/kg (mouse)	
		2,625 mg/kg (rat)	

- **Primary irritant effect:**
- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **After inhalation:** Irritant to skin and mucous membranes.
- **Respiratory or 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**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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Type of test	Effective concentration	Method	Assessment
EC50/96 h	1.8 mg/l (fish)		
EC50/24 h	5.3 mg/l (daphnia magna)		
NOEC	0.24 mg/L (fish)		

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· 14.1 UN number or ID number	
· ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

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· UN "Model Regulation": Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 75
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
- **REGULATION (EU) 2024/590 on substances that deplete the ozone layer** Substance is not listed.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of previous version:** 05.07.2021
- **Version number of previous version:** 10.03
- **Abbreviations and acronyms:**
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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EU

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· * Data compared to the previous version altered.

Annex: Exposure scenario

- **Short title of the exposure scenario** Formulation and packing/repacking of substances and mixtures
- **Sector of Use**
 - SU1 Agriculture, forestry, fishery
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
 - SU9 Manufacture of fine chemicals
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
 - SU14 Manufacture of basic metals, including alloys
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU1 Agriculture, forestry, fishery
 - SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- **Product category**
 - PC9a Coatings and paints, thinners, paint removers
 - PC9b Fillers, putties, plasters, modelling clay
 - PC12 Fertilisers
 - PC14 Metal surface treatment products
 - PC15 Non-metal-surface treatment products
 - PC18 Ink and toners
 - PC19 Intermediate
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC27 Plant protection products
 - PC37 Water treatment chemicals
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - PROC5 Mixing or blending in batch processes
 - PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC11 Non industrial spraying
 - PROC13 Treatment of articles by dipping and pouring
 - PROC14 Tableting, compression, extrusion, pelletisation, granulation
 - PROC15 Use as laboratory reagent
 - PROC22 Manufacturing and processing of minerals and/or metals at substantially elevated temperature
 - PROC26 Handling of solid inorganic substances at ambient temperature
- **Environmental release category**
 - ERC1 Manufacture of the substance
 - ERC2 Formulation into mixture
 - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC5 Use at industrial site leading to inclusion into/onto article
 - ERC6a Use of intermediate
 - ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 - ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

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- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Solid
- **Concentration of the substance in the mixture** Raw material.
- **Used amount per time or activity** ≤ 1 tons per day
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
Indoor application.
Outdoor application.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures** Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
Do not inhale dust / smoke / mist.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water** No special measures required.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.