



Safety Data Sheet

Date of Issue: 12.07.2021

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
Address : PO Box 34125, Birkenhead, Auckland 0746
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	Iron (II) Chloride tetrahydrate
Product Code	28108
CAS No.	13478-10-9

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Acute toxicity, Oral (Category D), H302
Skin irritation (Category A), H315
Serious eye damage (Category A), H318

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : **Danger**

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statement(s)

Prevention

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves.

Response

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.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see supplemental first aid instructions on this label).
P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards - none

3: Composition/information on ingredients

3.1 Substances

Synonyms : Ferrous chloride
Formula : $Cl_2Fe \cdot 4H_2O$
Molecular weight : 198.81 g/mol
CAS-No. : 13478-10-9
EC-No. : 231-843-4

Hazardous ingredients

Component	Classification	Concentration
Ferrous chloride tetrahydrate		
	6.1 D; 6.3 A; 8.3 A; H302, H315, H318	<= 100 %

4: First aid measures

4.1 Description of first-aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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

Hydrogen chloride gas , Iron oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

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

Air sensitive. Hygroscopic. Store under inert gas.

7.3 Specific end use(s)

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

8: Exposure controls/personal protection

8.1 Control parameters

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8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment

General information:

Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection**Hand Protection:**

Use suitable protective gloves if risk of skin contact.

Other:

Wear suitable protective clothing.

Respiratory Protection:

In case of inadequate ventilation, use respiratory protection.

Hygiene measures:

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9: Physical and chemical properties**9.1 Appearance**

Physical state	: solid
Form	: Crystals
Color	: Pale green
Odor	: Odourless
Odor threshold	: No data available.
Ph	: 2.5 (100 g/l, 20 °C)
Melting point/freezing point	: 105 °C
Initial boiling point & boiling range:	No data available.
Flash Point	: not applicable
Evaporation rate	: No data available.
Flammability (solid, gas)	: No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.

Flammability limit - lower (%): No data available.

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

Vapor pressure	: 1.3 kPa (700 °C)
Vapor density	: No data available.
Relative density	: 1.93 (20 °C)

Solubility(ies)

Solubility in water : Soluble

Solubility (other) : No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-ignition temperature : No data available.

Decomposition temperature : No data available.

Viscosity : No data available.

10: Stability and reactivity**10.1 Reactivity**

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Exposure to moisture.

10.5 Incompatible materials

A mixture of this product and sodium or potassium will explode on impact., Strong bases, Strong acids, Ethylene oxide, Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on likely routes of exposure

Ingestion : Harmful if swallowed.

Inhalation : Dust may irritate throat and respiratory system and cause coughing.

Skin Contact : Causes skin burns.

Eye contact : Causes serious eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: No data available.

Dermal

Product: No data available.

Inhalation

Product: No data available.

Repeated dose toxicity

Product: May cause liver and/or renal damage.

Skin Corrosion/Irritation

Product: Causes skin burns.

Serious Eye Damage/Eye Irritation

Product: Causes serious eye damage.

Respiratory or Skin Sensitization

Product: Not a skin sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Product: None known.

Specific Target Organ Toxicity - Repeated Exposure

Product: None known.

Aspiration Hazard

Product: Not classified

Other effects: None known.

12: Ecological information

12.1 Toxicity

No data available

Toxicity to bacteria Remarks: (in analogy to similar products)

The value is given in analogy to the following substances:

aluminium(III) chloride, anhydrous
(Ferrous chloride tetrahydrate)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data 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

No data available

13: Disposal considerations

13.1 Waste treatment methods**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14: Transport Information Table
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	ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods

				Regulations
14.1	UN Number	3260	3260	3260
14.2	UN Proper Shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Ferrous chloride tetrahydrate)	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Ferrous chloride tetrahydrate)	Corrosive solid, acidic, inorganic, n.o.s. (Ferrous chloride tetrahydrate)
14.3	Transport Hazard Class	8	8	8
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	none		
14.7	Incompatible Materials	A mixture of this product and sodium or potassium will explode on impact., Strong bases, Strong acids, Ethylene oxide, Strong oxidizing agents		
14.8	Hazchem Code	2X		

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR004518

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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