

## Iron(III) chloride hexahydrate

31232-250G

Version 1.4

Revision Date 16.12.2022

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

#### 1.1. Product identifier

Product name : Iron(III) chloride hexahydrate  
SDS-number : 000000020564  
Type of product : Substance  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.  
  
Chemical name : Iron(III) chloride-6-hydrate  
CAS-No. : 10025-77-1  
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

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

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :  
For further information, please contact: : [SafetyDataSheet@Honeywell.com](mailto:SafetyDataSheet@Honeywell.com)

#### 1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)  
Country based Poison : see chapter 15.1

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**SECTION 2: Hazards identification**

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

**REGULATION (EC) No 1272/2008**

Corrosive to metals Category 1  
H290 May be corrosive to metals.  
Acute toxicity Category 4 - Oral  
H302 Harmful if swallowed.  
Skin irritation Category 2  
H315 Causes skin irritation.  
Serious eye damage Category 1  
H318 Causes serious eye damage.

**2.2. Label elements**

**REGULATION (EC) No 1272/2008**

Hazard pictograms



Signal word

: Danger

Hazard statements

: H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

Precautionary statements

: P234 Keep only in original container.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
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.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

**3.1. Substance**

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Iron(III) chloride-6-hydrate	10025-77-1 231-729-4	Met. Corr. 1; H290 Acute Tox. 4; H302; Oral Skin Irrit. 2; H315 Eye Dam. 1; H318	<= 100 %	

**3.2. Mixture**

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

*General advice:*

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

*Inhalation:*

If inhaled, remove to fresh air. If symptoms persist, call a physician.

*Skin contact:*

After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.

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*Eye contact:*

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

*Ingestion:*

When swallowed, allow water to be drunk. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray

Foam

Carbon dioxide (CO<sub>2</sub>)

Dry powder

*Extinguishing media which shall not be used for safety reasons:*

High volume water jet

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

The product itself does not burn.

Some risk may be expected of corrosive and toxic decomposition products.

Fire may cause evolution of:

Chlorine (Cl<sub>2</sub>)

Gaseous hydrogen chloride (HCl).

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### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
Do not use a solid water stream as it may scatter and spread fire. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment. Provide adequate ventilation. Avoid dust formation. Avoid breathing dust. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

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

Use mechanical handling equipment.  
Pick for disposal in tightly closed containers  
Clean contaminated surface thoroughly.

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Avoid dust formation. Provide exhaust ventilation if dust is formed. Avoid inhalation, ingestion and contact with skin and eyes.

*Advice on protection against fire and explosion:*

Normal measures for preventive fire protection.

*Hygiene measures:*

Separate rooms are required for washing, showering and changing clothes. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace.

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

*Further information on storage conditions:*

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not leave vessels/containers open Avoid product residues in/on containers.

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

no additional data available

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

**8.1. Control parameters**

*Occupational exposure limits:*

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Iron(III) chloride-6-hydrate	EH40 WEL TWA	1 mg/m <sup>3</sup> as Fe		
Iron(III) chloride-6-hydrate	EH40 WEL STEL	2 mg/m <sup>3</sup> as Fe		
Iron(III) chloride-6-hydrate	EH40 WEL STEL	2 mg/m <sup>3</sup> as Fe	15 minutes	

TWA - Time weighted average

STEL - Short term exposure limit

**DNEL/ PNEC-Values**

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Iron(III) chloride-6-hydrate	Workers / Long-term systemic effects		2,8mg/kg bw/d	Skin contact	
Iron(III) chloride-6-hydrate	Consumers / Long-term systemic		1,4mg/kg bw/d	Skin contact	

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	effects				
Iron(III) chloride-6-hydrate	Consumers / Long-term systemic effects		0,28mg/kg bw/d	Ingestion	
Iron(III) chloride-6-hydrate	Consumers / Acute systemic effects		20mg/kg bw/d	Ingestion	

No PNEC data available.

Iron(III) chloride-6-hydrate	:	No data available
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**8.2. Exposure controls**

**Occupational exposure controls**

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.  
Avoid contact with skin and eyes.

**Engineering measures**

Local exhaust  
acid resisting floor  
Emergency sprinkling nozzle

**Personal protective equipment**

*Respiratory protection:*

In the case of dust or aerosol formation use respirator with an approved filter.

*Hand protection:*

Glove material: Natural Latex  
Break through time: > 480 min  
Glove thickness: 0,6 mm  
Lapren®706  
Gloves must be inspected prior to use.  
Replace when worn.

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Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.  
Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.  
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.  
Manufacturer's directions for use should be observed because of great diversity of types .  
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

*Eye protection:*  
Safety goggles

*Skin and body protection:*  
acid-proof protective clothing

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

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

Physical state	: solid
Colour	: light brown
Odour	: weak
molecular weight	: 270,3 g/mol
Melting point/range	: 37 °C
Boiling point/boiling range	: 280 - 285 °C
Flammability	: The product is not flammable.
Upper explosion limit	: Not applicable



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Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No decomposition if used as directed.
pH	:	ca. 1,8 Concentration: 10 g/l at 25 °C
Viscosity, kinematic	:	No data available
Water solubility	:	920,0 g/l at 20 °C
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	1 hPa at 194 °C
Density	:	ca. 2,8 g/cm <sup>3</sup> at 20 °C
Relative vapour density	:	No data available

### 9.2 Other Information

The product is hygroscopic. Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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Stable under normal conditions.

### 10.2. Chemical stability

No decomposition if used as directed.

### 10.3. Possibility of hazardous reactions

Corrosive in contact with metals

### 10.4. Conditions to avoid

Keep away from heat.  
Protect from atmospheric moisture and water.

### 10.5. Incompatible materials

Strong oxidizing agents  
Strong bases  
Alkali metals  
Metals

### 10.6. Hazardous decomposition products

Hydrogen chloride

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*

LD50

Species: Mouse

Value: 1.300 mg/kg

*Acute dermal toxicity:*

Not classified due to data which are conclusive although insufficient for classification.

*Acute inhalation toxicity:*

Not classified due to data which are conclusive although insufficient for classification.

*Skin irritation:*

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Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)

*Eye irritation:*

Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)

*Respiratory or skin sensitisation:*

Not classified due to data which are conclusive although insufficient for classification.

*Carcinogenicity:*

Note: Not classified due to data which are conclusive although insufficient for classification.

*Germ cell mutagenicity:*

Note: Not classified due to data which are conclusive although insufficient for classification.

*Reproductive toxicity:*

Remarks: Not classified due to data which are conclusive although insufficient for classification.

*Aspiration hazard:*

Not applicable

### 11.2. Information on other hazards

Endocrine disrupting properties

No data available

*Other information:*

Toxicological data applies only to the water free substance.

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## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*

No data available

*Toxicity to aquatic plants:*

No data available

*Toxicity to Microorganisms:*

No data available

*Toxicity to aquatic invertebrates:*

No data available

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### 12.2. Persistence and degradability

*Biodegradability:*

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

No data available

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

Do not flush into surface water or sanitary sewer system.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:  
EC Directive 2006/12/EC; 2008/98/EEC  
Regulation No. 1013/2006

For personal protection see section 8.

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**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID:3260

IMDG:3260

IATA:3260

**14.2 UN proper shipping name**

ADR/RID:CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.(IRON(III) CHLORIDE-6-HYDRATE)

IMDG:CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.(IRON(III) CHLORIDE-6-HYDRATE)

IATA:Corrosive solid, acidic, inorganic, n.o.s.(Iron(III) chloride-6-hydrate)

**14.3 Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA: 8

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazards**

ADR/RID:no

Marine pollutant: no

**14.6 Special precautions for user**

IMDG Code segregation group (SGG1) – ACIDS,

**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**

Basis	Value	Remarks
Directive 2012/18/EC		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1$ % (w/w).

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**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Gifinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

**Other inventory information**

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US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand  
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)  
On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Text of H-statements referred to under heading 3

Iron(III) chloride-6-hydrate : H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.

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H318 Causes serious eye damage.

### Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

#### Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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