

Iron(II) sulfate heptahydrate**12354-6X1KG**

Version 1.1

Revision Date 02/01/2022

Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name : Iron(II) sulfate heptahydrate

Number : 000000020686

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : solid

Color : blue green

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Acute toxicity, Category 4, Oral
Skin irritation, Category 2
Eye irritation, Category 2A

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

:

Warning

Hazard statements

:

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements

:

Prevention:
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

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

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

: $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$

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Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Iron (II) sulfate (1:1) heptahydrate	7782-63-0	100.00 %

SECTION 4. FIRST AID MEASURES

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.
- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Most important symptoms/effects, acute and delayed : No information available.
- Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray

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	Foam Carbon dioxide (CO ₂) Dry powder
Specific hazards during firefighting	: In case of fire hazardous decomposition products may be produced such as: Sulphur oxides Toxic metal oxide fumes
Special protective equipment for firefighters	: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
Further information	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust. Avoid contact with skin, eyes and clothing.
Environmental precautions	: Prevent further leakage or spillage if safe to do so. Should not be released into the environment. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Use mechanical handling equipment. Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling	: Wear personal protective equipment. Use only in well-ventilated areas.
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Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Conditions for safe storage, including any incompatibilities : Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.

Further information on storage conditions : Keep under inert gas.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

Hand protection : Latex gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Wash hands before breaks and at the end of workday.
Separate rooms are required for washing, showering and changing clothes.
Keep working clothes separately.

Exposure Guidelines

Components	CAS-No.	Value	Control	Upda	Basis
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			parameters	te	
Iron (II) sulfate (1:1) heptahydrate	7782-63-0	TWA : Time weighted average	1 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Expressed as : as Fe			
Iron (II) sulfate (1:1) heptahydrate	7782-63-0	REL : Recommended exposure limit (REL):	1 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Further information	:	Expressed as : as Fe			
Iron (II) sulfate (1:1) heptahydrate	7782-63-0	TWA : Time weighted average	1 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Expressed as : as Fe			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: solid
Color	: blue green
Odor	: odourless
Odor threshold	: Note: No data available
pH	: 2.5 - 4.0 at 50.00 g/l, 20 °C
Melting point/range	: ca. 64 °C Note: Elimination of water of crystallisation
Boiling point/boiling range	: Note: No data available

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Flash point	: Note: Not applicable
Evaporation rate	: Note: No data available
Flammability	: The product is not flammable.
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: No data available
Vapor density	: Note: No data available
Density	: ca. 1.9 g/cm ³ at 20 °C
Water solubility	: 156.5 g/l at 20 °C
Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: Note: Not applicable
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Molecular weight	: 278.01 g/mol

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Protect from atmospheric moisture and water. Protect from exposure to air/oxygen. Direct sources of heat.
Incompatible materials	: Strong oxidizing agents Air
Hazardous decomposition products	: Sulphur trioxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: Note: Classification based on Annex VI of regulation 1272/2008/EC.
Acute inhalation toxicity	: Note: Not classified due to data which are conclusive although insufficient for classification.
Acute dermal toxicity	: Note: Not classified due to data which are conclusive although insufficient for classification.
Skin irritation	: Species: Rabbit Result: irritating Method: OECD Test Guideline 404
Eye irritation	: Note: Classification based on Annex VI of regulation

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1272/2008/EC.

Sensitisation	: Species: Mouse Result: Not a skin sensitizer. Method: OECD Test Guideline 429
Repeated dose toxicity	: Species: Rat Exposure time: 49 d NOAEL (No observed adverse effect level): 100 mg/kg/d
Genotoxicity in vitro	: Test Method: Chromosome aberration test in vitro Result: negative : Test Method: in vitro assay Cell type: Salmonella typhimurium Result: negative

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	: LC50: > 67 mg/l Exposure time: 96 h Species: Oryzias latipes (Orange-red killifish) : LC50: > 17 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to algae	: Biomass EC50: 18 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) : Biomass NOEC: 11 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae)

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Elimination information (persistence and degradability)

Biodegradability : Note: The methods for determining biodegradability are not applicable to inorganic substances.

Further information on ecology**Ecotoxicology Assessment**

Results of PBT assessment
Not applicable
Not applicable

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Not dangerous goods

TDG Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemicals Act (AIC), as amended : On the inventory, or in compliance with the inventory

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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

National regulatory information

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards : Acute Health Hazard

CERCLA Reportable Quantity : 1000 lbs

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California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK : Iron (II) sulfate (1:1) heptahydrate 7782-63-0

New Jersey RTK : Iron (II) sulfate (1:1) heptahydrate 7782-63-0

Pennsylvania RTK : Iron (II) sulfate (1:1) heptahydrate 7782-63-0

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group