

MATERIAL SAFETY DATA SHEET

• PT. NUANSA KIMIA SEJATI •

Date of issue : 10.08.1997

According to EC Directive 91/155/EEC

1. Identification of substance/preparation and of the company/undertaking

Identification of the product

Product Name : Iron (II) sulfate hepta hydrate
Use of the substance/preparation : Chemical Production, waste & water treatment
Company Identification : PT. Nuansa Kimia Sejati
Website Address : www.nuansakimia.com
Telp : +621-21-55767226

2. Composition/information on ingredients

Synonyms : Ferrous sulfate heptahydrate
CAS-NO : 7782-63-0
M : 278.02 g/mol
Chemical formula : $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$
EC Index No :
EC No :

3. Hazards identification

Harmful if swallowed

4. First aid measures

After inhalation : Fresh air
After skin contact : wash off with plenty of water. Remove contaminated clothing
After eyes contact : rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist.
After swallowing : make victim drink plenty of water, call in physician.

5. Fire-fighting measures

Suitable extinguishing media :
In adaptation to material stored in the immediate neighborhood.

Special Risks : Non Combustible
Special Protective equipment for fire fighting :
Do not stay in dangerous zone without self contained breathing apparatus.
Other information : Prevent fire fighting water from entering surface water or groundwater.

6. Accidental release measures

Person related precautionary measures :
Avoid substance contact . Avoid inhalation of dust. Ensure supply of fresh air in enclosed room
Environmental protection measures : Do not allow to enter sewerage system

Procedure of cleaning / absorption :
Take up dry. Forward to disposal. Cleaned up affected area. Avoid generation of dusts.

7. Handling and storage

Handling
No Further requirements.

Storage
Tightly closed. Dry. At + 15°C to + 25°C.

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8. Exposure controls/personal protection

Personal protective equipment :

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substance handled.

The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection : required when dusts are generated

Eyes protection : required

Hand protection :

In full contact

Glove material	Nitrile rubber
Layer thickness	0.11 mm
Breakthrough time	> 480 Mn

In splash contact

Glove material	Nitrile rubber
Layer thickness	0.11 mm
Breakthrough time	> 480 Mn

The protective gloves to be used must comply with the specification of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 741 Dermatril ®L (full contact) and 741 Dermatril ®L (splash contact). The breakthrough time state above were determined by KCL in laboratory test acc. to EN 374 with samples of the recommended gloves type.

This recommendation apply only to the product stated in the material safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving or mixing with other substance and under condition deviating from those stated in EN374. Pls. contact the supplier of CE-approved gloves.

Industrial hygiene :

Immediately change contaminated clothing. Apply skin protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form	: powder
Color	: Greenish
Odor	: Odorless
pH Value (20 °C) at 50 g/l H ₂ O	: 3-4
Melting point	: >60 °C (release of crystal water), (approx)
Boiling point	: not available
Ignition temperature	: not combustible
Flash point	: not flammable
Explosion limits	
Lower	: not applicable
Upper	: not applicable
Vapour pressure	: not applicable
Density (20°C)	: ~ 1.89 g/cm ³ (approx)
Bulk density	: ~ 600 kg/m ³ (approx)
Solubility in water (20°C)	: ~ 400 g/L
Thermal decomposition	: > ~ 300 °C (approx)

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10. Stability and reactivity

Condition to be avoided

Strong heating

Substances to be avoided

No Information available

Hazardous decomposition products

In the event of fire . See chapter 5

11. Toxicological information

Acute toxicity

LD₅₀ (oral, rat): 319 mg/kg (IUCLID) as anhydrous substance

Subacute to chronic toxicity

Sensitization

In animal experiments : No sensitization effects

Bacterial mutagenicity : Ames test negative

Further Toxicological information

After inhalation of dust : Irritating symptoms in the respiratory tract

After skin contact : slight Irritations

After eyes contact : Irritations

After swallowing : bloody vomiting, diarrhea, drop in blood pressure

Further Data

The product should be handled with the care usual when dealing with chemicals

12. Ecological information

Biological degradation

Methods of the determination of biodegradability are not applicable to inorganic substances.

Behavior in environmental compartments

Concentration in organisms is not to be expected

Ecotoxic effects :

Biological effects :

Fish toxicity :L. Macrochirus LC₅₀ : 925 mg/L /96 h (IUCLID)

bacterial toxicity : Pseudomonas Fluorescens EC₅₀ : 100 mg/l /48 h (IUCLID)

Further ecological data:

No ecological problems are to be expected when the product is handled and use with due care and attention.

13. Disposal Considerations

Product

Chemical must be disposed of in compliance with respective national regulations

Packaging

The product packaging must be disposed of in compliance with the country – specific regulations.

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14. Transport information

Not subject to transport regulations

15. Regulatory information

Labeling according to EC directives :

Symbols	Xn	Harmful
R-Phrases	22	Harmful if swallow
S-Phrases	24/25	Avoid contact with skin and eyes.

16. Other information

Reason for alternation General update

Regional Representative This information is given on the authorized material safety data sheet in your country

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