# Ferrous Ammonium Sulfate Hexahydrate

Safety Data Sheet

Dateofissue:31/08/2019

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Substance |
| Substance name | : | Ferrous Ammonium Sulfate Hexahydrate |
| Chemical name | : | Iron (II) Ammonium Sulfate Hexahydrate |
| CAS No | : | 7783-85-9 |
| Formula | : | FeH8N2O8S2·6H2O |

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

| | | |
|---|---|---|
| Use of the substance/mixture | : | For laboratory and manufacturing use only. |

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

Shri Shanti Laboratories,

Shri Shanti Niwas,

Gangashahar Road,

Bikaner-334001

### 1.4. Emergency telephone number

| | | |
|---|---|---|
| Emergency number | : : | +91-9571511119 ; Hazard response# : +91-9799144441 |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335

### 2.2. Label elements

**GHS-US labelling**

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :
P261 - Avoid breathing dust
P264 - Wash exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, eye protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER/doctor/…/if you feel unwell
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 2.3. Other hazards

| | | |
|---|---|---|
| Other hazards not contributing to the classification | : | None. |

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | GHS-US classification |
|---|---|---|---|
| Ferrous Ammonium Sulfate Hexahydrate (Main constituent) | (CAS No) 7783-85-9 | 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335 |

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin : Causes skin irritation.

contact Symptoms/injuries after eye : Causes serious eye irritation.

contact Symptoms/injuries after : Nausea. Vomiting. Diarrhoea. Cardiac and blood circulation effects.

ingestion Chronic symptoms : Enlargement/affection of the liver.

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

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : Not flammable.

Explosion hazard : Not applicable.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store aways from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash exposed skin thoroughly after handling.

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

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, incompatible materials, Protect from moisture. Keep container tightly closed.

Incompatible products : Strong oxidizers. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| Ferrous Ammonium Sulfate Hexahydrate (7783-85-9) | | |
|---|---|---|
| USA ACGIH | ACGIH TWA (mg/m³) | 1 mg/m³ Iron salts, soluble, as Fe |

### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state : Solid

Appearance : Crystalline powder.

Molecular mass : 392.13 g/mol

Colour : Green. Colourless.

Odour : Odourless. characteristic.

Odour threshold : No data available

pH : 3 - 5 5% solution

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 100 °C

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Self ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : 1.865

Density : 1.865 g/cm³

Solubility : Water: 269 g/l

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : Not applicable.

Oxidising properties : No data available.

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Do not allow contact with air. Moisture. Incompatible materials.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Gaseous ammonia. Sulfur compounds.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| Ferrous Ammonium Sulfate Hexahydrate ( \f )7783-85-9 | |
|---|---|
| LD50 oral rat | 3250 mg/kg |

Skin corrosion/irritation : Causes skin irritation.
pH: 3 - 5 5% solution

Serious eye damage/irritation : Causes serious eye irritation.
pH: 3 - 5 5% solution

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classifiedBased on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classifiedBased on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classifiedBased on available data, the classification criteria are not met

Aspiration hazard : Not classifiedBased on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin : Causes skin irritation.

contact Symptoms/injuries after eye : Causes serious eye irritation.

contact Symptoms/injuries after : Nausea. Vomiting. Diarrhoea. Cardiac and blood circulation effects.

ingestion Chronic symptoms : Enlargement/affection of the liver.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

| Ferrous Ammonium Sulfate Hexahydrate (7783-85-9) | |
|---|---|
| Persistence and degradability | Not established. |

### 12.3. Bioaccumulative potential

| Ferrous Ammonium Sulfate Hexahydrate (7783-85-9) | |
|---|---|
| Bioaccumulative potential | Not established. |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

**Overland transport**

No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

| **Ferrous Ammonium Sulfate Hexahydrate (7783-85-9)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) : | 1000 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |

### 15.2. International regulations CANADA

| **Ferrous Ammonium Sulfate Hexahydrate (7783-85-9)** | |
|---|---|
| Not listed on the Canadian DSL (Domestic Sustances List) inventory. | |
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

**EU-Regulations**

No additional information available

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

**Classification according to Directive 67/548/EEC or 1999/45/EC**

Not classified

### 15.2.2. National regulations

| **Ferrous Ammonium Sulfate Hexahydrate (7783-85-9)** |
|---|
| Not listed on the Canadian Ingredient Disclosure List |

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Indication of changes : None

Other information : None.

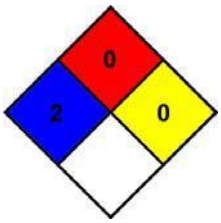
Full text of H-phrases: see section 16:

| | |
|---|---|
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.




### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : B