IRON SULFATE HEPTAHYDRATE
MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the Substance/Mixture and Manufacturer/Contractor

1.1 Product Description

Product Structure: Mixture
Mixture Name : Iron Sulphate (Ferrous Sulphate) Heptahydrate
EG/EINECS no : 31-847-6
CAS no: 7758-99-8
Formula : FeSO4.7H2O

1.2 Relevant Uses and Recommendations of the Substance / Mixture

1.2.1 Related Uses

Soil additive/regulator, pesticide, feed additive and antiseptic in agriculture;
Leather and fabric color stabilizer in textile, Refining of Copper; pharmaceutical making, wood preservative,
Engraving and Lithography; In mineral ore processing, rubber and steel processing.

1.2.2. It is recommended not to use

Iron Sulphate Heptahydrate contains >0.1% Nickel Sulphate, so it should not be used in consumer products unless the final ratio is <0.1% reduced.

1.3 Manufacturer/Contractor Company Details

Company Details: Neochem Tarımsal Kimyevi Maddeler San.Ve Tic.Ltd.Şti
Adress : Kazımdirik Mh.284.Sk.No:2 Folkart Time Ofis 2 K:6/615
Bornova/İZMİR

1.3.1 Emergency Phone Numbers

Emergency Telephone Number : During working hours : +90 232 502 20 58
Except for working hours : +90 532 563 16 83

SECTION 2: Identifying / Recognizing the Hazard

2.1. Classification of the Product/Mixture

Class (EC 1272/2008)
Physical and Chemical Hazards: Not Classified
Human Health: Acute Poisoning. 4 - H302; Skin and Skin Irritation. 2 - H315; Eye Irritation. 2 - H319
Water and Environment 1 - H400; Continuous in Water 1 - H410
Classification: (67/548/EEC) Xn;R22 Xi;R36/38 N;R50/53
See section 16 for the full definition and phrases of hazards.

2.2 Items on Label According to Annex 1272/2008 EG
Substance name :
Hazard Pictograms (CLP):


WARNING CLP: - **WARNING**
Hazard Statements (CLP): - **H302, H319, H315, H400, H410**
Action Statements (CLP): - **P273, P280, P301+312, P302+P352, P 305+351+338, P501**

2.3 Other Hazards
The product is acidic when dissolved in water.

SECTION 3: Information on Ingredients and Ingredients

3.1 Content
Product Name: Ferrous Sulphate Heptahydrate
CAS-No. 7758-99-8
EU Index No. 029-004-00-0
EC No. 231-847-6

3.2 Mixture
N/A – not applicable

SECTION 4: First Aid Measures

4.1 First Aid Recipe General First Aid:
If you think you are in danger or observe symptoms, seek medical advice.
First Aid In Case of Inhalation: If possible, stay away from the danger area and seek medical assistance in a clean air or well-ventilated environment.
First Aid in Case of Skin Contact: Remove contact clothing and wash all contacted areas with plenty of soap and water. In case of irritation seek medical assistance.
First Aid in Case of Eye Contact: Rinse immediately with plenty of water for 15 minutes, seek medical assistance.
First Aid If Ingested: If swallowed, do not vomit and seek medical assistance as soon as possible.

4.2. The Most Important Symptoms That May Occur Over Time or Immediately
As mentioned above, shortness of breath/frequency, skin/skin irritation, eye irritation, stomach pain

4.3. Situations Requiring Emergency Medical Intervention and Observation
As noted above, if irritation, shortness of breath/frequency persists, or if swallowed, seek medical attention immediately.

SECTION 5: Fire Fighting Measures

5.1. Fire Fighting Tools
Suitable Extinguishing Media: The product is not flammable. Use suitable fire extinguisher for other objects around (micronized water, CO2, Foam).
Unsuitable Extinguishing Media: All extinguishing media are suitable if also suitable for surrounding objects.

5.2. Advice on Special Hazards That May Occur
Avoid breathing potentially toxic fumes (in the presence of sulfur oxides SOx).

Fire hazard: Unusual fire hazard
Explosion hazard: Unusual explosion hazard
Reactivity: When heated above 400C, the product emits toxic fumes such as iron oxide and sulfur dioxide. The material is acidic when dissolved in water and can form hydrogen gas when it reacts with magnesium.

5.3. Fire Fighting Advice
Fire Precautions: Follow all normal fire fighting procedures.
Protection During Fire Fighting: Wear appropriate protective equipment and be conscious, if possible, use breathing devices/apparatuses that completely cover the face.

SECTION 6: Measures in Case of Accidental Release/Release

6.1 Personal Precautions, Protective Equipment and Emergency Procedures
General Precautions: Provide adequate ventilation. Use protective gloves, goggles and suitable protective clothing.

6.2 Environmental Precautions
Prevent entry to sewers and other water sources

6.3 Tools and Methods to be Used for Containment and Cleaning
Avoid dust formation. Collect the dust using a special dust vacuum cleaner with a particle filter or sweep it carefully into the closed container. Cover the product with sand or earth and carefully clean all products. Place in another clean and dry container, seal and remove from area. Do not clean the contaminated area with water.

SECTION 7: Handling/Transport and Storage

7.1 Precautions for Safe Use/Transport
Avoid dust formation. Do not breathe dust. Keep the product in a well-ventilated area or make sure to use adequate respiratory protection (dust mask). Avoid contact with skin and eyes with work clothes, gloves and safety glasses. Do not eat, smoke or drink liquids during use. Be sure to close the packaging well after use.

Precautions for Safe Use/Transport: Prevent unauthorized access. Avoid contact with skin and eyes. Do not dry the product.

Hygiene Precautions: Do not eat, drink or smoke while using this product. Before removing contaminated/contacted clothing, wash immediately with plenty of water in case of contact with skin.

7.2 Conditions for Safe Storage Even If There Are Any Incompatibilities
Technical Precautions: Keep container tightly closed in a well-ventilated place.
Storage Precautions: Keep in its original container.

7.3 About End Use
Check out part 1.

SECTION 8: Exposure/Exposure and Worker Safety

8.1 Control Parameters
In the working environment, exposure limit during working hours (OEL TWA 8 hours) CuSO4: 1mg/m3 (mean existence OEL)

Please review existing laws, regulations and laws for different countries. In case the standards are not met, make sure that the employees use protective clothing and face masks.

About CuSO4 in REACH DNEL, PNEC, and ERV(in CSR) regulations:
Employee Health/Safety (Iron Sulphate)
Long-term systemic skin/skin effects: DNEL = 137 mg/m3
Other effects were not observed, not mentioned.

Environmental Effects (Iron Sulphate):
Suda : PNEC = 7,8 µg/l (tatlı su)
PNEC = 5,2 µg/l (tuzlu su)
PNEC = 87 mg/kg dw (tatlı su)
PNEC = 676 mg/kg dw (tuzlu su) 8.2: Exposure/Exposure Controls

Appropriate Engineering Controls: Natural ventilation should be adequate for normal conditions of use. Local exhaust ventilation (LEV) is recommended.

Worker Equipment: Gloves, goggles, dust mask and suitable protective clothing.
Hand Protection: Use gloves.
Eye Protection: Use goggles or a mask.
Skin and Skin Protection: Use appropriate clothing.
Respiratory: Unless local exhaust ventilation (LEV) is used, a dust mask with a suitable filter is required.
Environmental: Do not allow the product to be discharged/released uncontrolled into the environment Avoid release to the environment.

SECTION 9: Physical and Chemical Properties

9.1 Basic Physical and Chemical Properties
Physical State: Solid
Appearance: Blue Crystals or Crystalline Powder
Color: Blue
Fragrance: None
Odor threshold: N.A.
pH: 4.0
Melting point: 110 C
Freezing point: N.A.
Boiling point: 110 C
Flash point: N.A.
Flammability (solid, gas): N.A.
Explosive limits: N.A.
Vapor pressure: 7.3 mm Hg at 25 °C
Relative density: 2.286 g/cm3
Resolution: 22g / 100ml
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity, kinematics: N.A.
Viscosity, dynamic: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.

9.2 Other Information
The product is hygroscopic and reacts with acid

BÖLÜM 10: Stabilite ve Reaktivite

10.1. reactivity
The product is stable under normal transport and storage conditions.

10.2. Chemical Stability
The product is stable under normal transport and storage conditions, but is hygroscopic.

10.3. Possibility of Hazardous Reaction
It decomposes above 110C.

10.4. Conditions to Avoid
Avoid exposure to high temperatures and weather, climate changes, keep dry to prevent sticking.
Avoid accumulation of dust and debris so that it does not enter drains or other waterways.

10.5. Incompatible Materials
Incompatible with fine powder metals, steel, nitromethane, hydrazine, hydroxylamine and magnesium

10.6. Dangerous waste
Copper oxides. Sulfur oxides

CHAPTER 11

11.1 Information on Toxicological Effects
Acute Toxicity: May cause serious damage to health if swallowed or inhaled for prolonged periods.
Skin Corrosion/Irritation: Skin contact may cause irritation. Prolonged contact may cause dermatitis.
Serious Eye Irritation: May irritate and cause corneal damageS
Respiratory or Skin Sensitization: n/a – none
Germ Cell Mutagenicity:
Carcinogenic: Not thought to be
Reproductive toxicity: n/a – none
Organ Toxicity (single exposure): n/a – none
Toxicity to a Specific Organ (with repeated exposure): Prolonged exposure (over years) may cause chronic effects as above and damage the kidneys and liver.
Inhalation Hazard:

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Very toxic to aquatic life, LC 50/96 hour values for fish < 1 mg / 1

12.2. Persistence and Degradability

When released into soil or water, the material is not expected to decompose harmlessly into the environment.

12.3. Bioaccumulation Potential
May bioaccumulate along the food chain

12.4. Mobility in Soil
In the soil, the material will leach into the groundwater.

12.5. Results of PBT and vPVB Assessment
N.A.- not applicable

12.6. Other Adverse Effects
not reported

SECTION 13: Disposal/Destruction

13.1 Waste Management
Consult local authorities for disposal recommendations.

SECTION 14: Transport Information
In accordance with ADR / RID / ADNR / IMDG / ICAO /IATA:

14.1. UN Number
UN-No: 3077

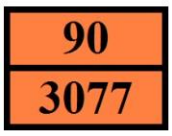
14.2. UN Proper Shipping Name
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. Shipment
Description: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)

14.3 Shipment Hazard
Class Class (UN): 9
Danger Label (UN): 9

Dangerous for Sea/Water
Other informations:

14.6 Special Precautions for the User
14.6.1 Road Transport
Hazard identification number (Kemler No.): 90
Class Code: M7

Orange Plate:



Tunnel Restrictor Code: E

14.6.2 Sea Freight
Limited Transport (IMDG):
Excluded Number of Carriage (IMDG): F-A
EmS No: S-F

14.6.3 Air Freight:
Follow IATA rules: Classified as Dangerous Goods according to the criteria used for air transport by the International Air Transport Association (IATA) Dangerous Goods Regulations; DANGEROUS GOODS

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code N/A - Not applicable

SECTION 15: Regulatory Information
15.1 Safety, Health and Environmental Legislation Specific to the Substance or Mixture

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Iron Sulfate, Hazardous substances and its annexes are listed in Annex I 67/548 / EC and Annex VI 1272/2008. This article has been specially prepared by its constituent elements in accordance with the EU 1907/2006 Reach legislation. This MSDS complies with the requirements of EC 1907/2006 Annex II and EU/453/2010.

15.2 Chemical Safety Assessment
A chemical safety assessment has been carried out under REACH.

Hazard statements:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H410 Long lasting in the aquatic environment, highly toxic.

Precautionary Statements:

P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P501 Dispose of contents/container. Dispose of waste and residues in accordance with local government requirements.

R-phrases:

S22 Do not breathe dust S26 Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S60 This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. see specific instructions / safety data sheets

Other Hazard Statements:

H400 Very toxic to aquatic life.
Other Precautionary Statements:
P264 Wash and clean thoroughly after exposure/use.

P270 Do not eat, drink or smoke when using this product.,
P301 + P312 IF SWALLOWED: Get medical attention or seek medical advice if you feel unwell.
P330 Rinse mouth with clean water. P
305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove your contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: seek medical advice.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Special treatment, treatment
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P362 Take off and wash contaminated clothing.
P391 Collect scraps and spillage.