SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier

Commercial Product Name

RAUTASULFAATTI

Substance name: Ferrous sulphate (7H2O)

CAS-No.: 7720-78-7

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

Recommended use

Raaka-aine perinnemaalien valmistukseen

1.3 Details of the supplier of the safety data sheet

Supplier

	Uulatuote Oy
Street address	Yttiläntie 265
Postcode and post office	32920 Kauvatsa
	Finland
Telephone	+358 10 820 0020
Telefax	+358 2-529 5011
Business ID	FI02264544
Email	uula@uula.fi

1.4 Emergency telephone number

United Kingdom of Great Britain and Northern Ireland:
National Poisons Information Service
+ 8 448 920 111, 24 hrs
Ireland: Dublin
+353 1 809 2166 (public). 24hrs
Malta:
+356 2545 0000/ +356 2545 6504

SECTION 2. HAZARDS IDENTIFICATION

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.1 Classification of the substance or mixture

1272/2008 (CLP)

Acute Tox. 4, H302
Eye Irrit. 2, H319
Skin Irrit. 2, H315

67/548/EEC - 1999/45/EC

Xi, Xn; R36/38-22

2.2 Label elements

1272/2008 (CLP)

GHS07

Signal word **Danger**

Hazard Statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

Precautionary Statements

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P332+P313	If skin irritation occurs: Get medical advice/attention.

2.3 Other hazards
No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
Hazardous components

CAS	EINECS	Chemical name of the substance	Concentration	Classification
7720-78-7	231-753-5	ferrous sulphate (7H2O)	> 82 %	Xn; R22; Xi; R36/38 Acute Tox. 4 , H302; Eye Irrit. 2, H319; Skin Irrit. 2, H315
7664-93-9	231-639-5	sulphuric acid	< 0,6 %	C; R35 Skin Corr. 1A, H314
7785-87-7	232-089-9	manganese sulphate	< 0,25 %	Xn; R48/20/22;N; R51-53; STOT RE 2, H373; Aquatic Chronic 2, H411

3.3 Other information
REACH Registration Number
CAS 7720-78-7: 01-2119513203-57-XXXX
CAS 7664-93-9: 01-2119458838-20-XXXX
CAS 7785-87-7: 01-2119456624-35-XXXX
For the full text of the R-phrases mentioned in this Section, see Section 16.
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

Inhalation
If breathed in, move person into fresh air.

Skin contact
Take off all contaminated clothing immediately. In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician.

Eye contact
Rinse immediately with plenty of lukewarm water, also under the eyelids, for at least 15 minutes. Consult a physician.

Ingestion
Do NOT induce vomiting. Rinse mouth with water. Drink plenty of water. If large quantities of this material are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed
Irritating to eyes and skin.

4.3 Indication of immediate medical attention and special treatment needed
No information available.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Non-combustible material.

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture
Burning produces noxious and toxic fumes. Sulphur oxides

5.3 Advice for firefighters
In case of insufficient ventilation wear suitable respiratory equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Avoid inhalation, ingestion and contact with skin and eyes. Use personal protective equipment.

6.2 Environmental precautions
The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and materials for containment and cleaning up
Neutralize with lime milk or soda and flush with plenty of water. Flush away traces with water. Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections
For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Use personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not get in eyes, on skin, or on clothing.

7.2 Conditions for safe storage, including any incompatibilities
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from oxidising agents and strongly acid or alkaline materials.

7.3 Specific end use(s)
No information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Threshold limits

7720-78-7	ferrous sulphate (7H2O)	1 mg/m^3 (8 h)	
7664-93-9	sulphuricacid	0,05 mg/m^3 (8 h) torakaalijae (HTP2013)	0,1 mg/m^3 (15 min)
7785-87-7	manganesesulphate	0,2 mg/m^3 (8 h) Mn, hengittyvä pöly	

Other information on limit values
No information available.

DNELs
No information available.

PNECs
No information available.

8.2 Exposure controls

Appropriate engineering controls
Avoid dust formation. Provide adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See the safety datasheet.

Individual protection measures

Respiratory protection
Breathing apparatus only if aerosol or dust is formed. Recommended Filter type: Half mask with a particle filter P2 (EN 143).

Hand protection
Protective gloves

Eye/face protection
Goggles

Skin protection
Use personal protective equipment.

Environmental exposure controls
The product should not be allowed to enter drains, water courses or the soil.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important Health Safety and Environmental Information

Appearance	light green Solid
Odour	odourless
Odour threshold	no data available
pH	> 1 (10 %-solution pH = 3 - 4)
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Explosive properties	
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Solubility(ies)	
Water solubility	570 g/l (20°C)
Fat solubility (solvent - oil to be specified)	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidising properties	no data available

9.2 Other information
Melting point / meltingrange: 64 º C.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Stable at normal ambient temperature and pressure.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Burning produces noxious and toxic fumes. Sulphur oxides

10.4 Conditions to avoid
Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Acids and bases

10.6 Hazardous decomposition products
No information available.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 (oral, rat) = 319 mg / kg,
LD50 (oral, mouse) = 680 mg / kg ferrous sulfate (x 7 H2O)
LD50 (oral, mouse) = 1520 mg / kg.

Irritation and corrosion
Causes eye and skin irritation. Irritation of mucous membranes Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Sensitisation
No information available.

Subacute, subchronic and prolonged toxicity
No information available.

STOT-single exposure
No information available.

STOT-repeated exposure
No information available.

Aspiration hazard
No information available.

Other information on acute toxicity
Liquid splashes may irritate the eyes and skin. May cause irritation to mucous membranes. Prolonged or repeated skin contact may cause skin irritation or even dermatitis. When ingested, irritation of mucous membranes and may cause injury to the gastrointestinal tract.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity
Toxicity to crustaceans: Ferrous sulphate: EC50/96h/Crangonyx pseudografilus = 95 mg / l

Toxicity to other organisms
No information available.

12.2 Persistence and degradability

Biodegradation
No information available.

Chemical degradation
No information available.

12.3 Bioaccumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Other adverse effects
No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of as hazardous waste in compliance with local and national regulations. Empty containers can be landfilled after cleaning, when in compliance with local regulations.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number Not classified as dangerous for conveyance in the meaning of the regulations for the transport of dangerous goods by road and rail.

14.2 UN proper shipping name -

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards
-

14.6 Special precautions for users
No information available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
WEL substance: Avoid exceeding of the given occupational exposure limits (see section 8).

15.2 Chemical safety assessment
No information available.

SECTION 16. OTHER INFORMATION

16.1 Additions, Deletions, Revisions
Version 1.0.

16.2 Key or legend to abbreviations and acronyms
- CLP - Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging
- **DNEL** - No observed adverse effect level
- **PNEC** - Predicted No Effect Concentration
- **PBT** - persistent, bioaccumulating and toxic.
- **vPvB** - very persistent and very bioaccumulating.

16.3 Key literature references and sources for data
REGULATION (EC) No 1272/2008, Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, Annex VI, Table 3.2. Material Safety Data Sheet: RAUTASULFAATTI Print Date 28.5.2010. Information and analyzes from different raw material manufacturers.

16.4 Classification procedure
REGULATION (EC) No 1272/2008 Classification according to Regulation (EU) 1272/2008 with the correlation table 67/548/EEC or 1999/45/EC (Annex VII of CLP).

16.5 List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements

R22	Harmful if swallowed.
R35	Causes severe burns.
R36/38	Irritating to eyes and skin.
R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R51	Toxic to aquatic organisms.
R53	May cause long-term adverse effects in the aquatic environment.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H411	Toxic to aquatic life with long lasting effects.

16.6 Additional information available from:

Provide adequate information, instruction and training for operators. Refer to attached safety data sheets and/or instructions for use.