

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

- 1.1 Name of Product:** GREEN UP LAWN SAND
- 1.2 Use of the Substance/Preparation:** Fertiliser/mosskiller
- 1.3 Manufacturer/Distributor:** Vitax Limited
Owen Street
Coalville
LE67 3DE Tel: 01530 510060 Fax: 01530 510299 Email: tech@vitax.co.uk
- 1.4 Emergency Contact:** Tel: 01530 510060 (Office Hours)
- IRL ONLY:** In the event of emergency, call the National Poisons Information Centre, Beaumont Hospital at 01 809 2166 or 01 837 9964.

2. HAZARDS IDENTIFICATION

2.1 Classification: Eye Irritation 2: H319 Causes serious eye irritation

2.2 Label elements:

Pictogram



Signal Word

Warning

Hazard Statements

H319 Causes serious eye irritation

Precautionary statements

P101: If medical advice is needed, have product container or label at hand
P102: Keep out of reach of children
P103: Read Label before use
P264: Wash hands thoroughly after handling
P280: Wear protective gloves/eye protection.
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.
P362 Take off contaminated clothing and wash before reuse.

2.3 Other hazards:

none known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures: Compound mineral fertiliser containing 4% nitrogen, 3% Fe as ferrous sulphate heptahydrate

Chemical Name	CAS-No./ EINECS-No.	Annex Index or REACH number	Symbol(s) and phrases	Precautionary statements:	Concentration [%]
Ferrous Sulphate	7782-63-0/ 231-753-5	026-003-01-4 Index number 01-2119513203-57- XXXX REACH registration number	GHS07 Acute Tox. 4 H302: Harmful if swallowed Skin Irrit. 2 H315: Causes skin irritation Eye Irrit. 2 H319: Causes serious eye irritation	P273 P280 P301/312 P302/352 P305/351/338 P313	10 – 19.9

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye contact – Immediately rinse with clean water for 15 minutes. Obtain prompt medical attention..

Skin contact – Wash exposed areas of skin with soap and water following use. Wash all contaminated clothing before re-use.

Ingestion – Do not induce vomiting. Wash out mouth with water and give water to drink. Obtain medical attention if symptoms persist or develop.

Inhalation – Remove from source of exposure to fresh air; seek medical attention if symptoms persist or develop.

4.2 Most important symptoms and effects, both acute and delayed

Information not available.

4.3 Indication of immediate medical attention and special treatment needed:

Information not available.

5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing Media:** Use Foam, carbon dioxide, dry powder, sand. The mixture is not classified as flammable as such extinguishing media should be chosen as appropriate for surrounding materials..
- 5.2 Special hazards arising from substance or mixture:**
Possible irritant fumes arising from combustion.
- 5.3 Advice for firefighters:** Cool down containers/equipment exposed to heat with a water spray. Contain spread of extinguishing fluids (these fluids may be hazardous for the environment). Wear complete protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions:** The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified -avoid contact with skin and eyes –wear appropriate coveralls and gloves, eye/face protection.
- 6.2 Environmental precautions:** Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) in large quantities contact local water authority and inform the Environment Agency.
- 6.3 Methods and material for containment and cleaning up:**
Sweep avoiding generating dust into labelled containers for recovery or contact specialist waste disposal contractor.

7. HANDLING & STORAGE

- 7.1 Precautions for Safe Handling:** Avoid contact with skin and eyes. Wash Hands thoroughly after handling. Do not eat, drink or smoke when using this product.
- 7.2 Conditions for Safe Storage:** Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials and strong oxidising agents.
- 7.3 Specific end use:** Fertiliser/lawn sand.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters:

Workplace exposure Limits as defined by UK HSE in document EH40/2005 where available:

Substance	CAS number	Workplace Exposure Limit				Comments
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)		
		ppm	mg.m ⁻³	ppm	mg.m ⁻³	
Iron salts (as Fe)	-	-	1	-	2	The Carc, Sen and Sk notations are not exhaustive. Notations have been applied to the substances identified in IOELV Directives*

*IOELV – Indicative Occupational Exposure Limit Values (IOLEV).

DNELs

Worker

Acute systemic effects, dermal: (FeS0₄*7H₂O) 2.8 mg/kg/d
 Acute systemic effects, inhalative: (FeS0₄*7H₂O) 9.9 mg/m³
 Systemic long-term effects, dermal: (FeS0₄*7H₂O) 2.8 mg/kg/d
 Systemic long-term effects, inhalative: (FeS0₄*7H₂O) 9.9 mg/m³

Consumer

Acute systemic effects, oral: (FeS0₄*7H₂O) 1.4 mg/kg/d
 Acute systemic effects, dermal: (FeS0₄*7H₂O) 1.4 mg/kg/d
 Acute systemic effects, inhalative: (FeS0₄*7H₂O) 2.5 mg/m³
 Systemic long-term effects, oral: (FeS0₄*7H₂O) 1.4 mg/kg/d
 Systemic long-term effects, dermal: (FeS0₄*7H₂O) 1.4 mg/kg/d
 Systemic long-term effects, inhalative: (FeS0₄*7H₂O) 2.5 mg/m³

PNECs

The PNECs given in this section were derived based on the concentration which would cause a 10% increase above typical natural background levels of iron in soil and sediment. Thus the respective PNEC is equal to 110% of the typical natural background level of iron.

Water

Iron is an essential trace element for fish, aquatic invertebrates and plants. A direct toxicity could not be demonstrated in tests. Therefore no PNEC was derived.

Sewage treatment plants (STP)

PNEC STP Fe: 500 mg/l; FeS0₄*7H₂O: 2483 mg/l

Sediment

PNEC Sediment (freshwater): Fe: 49.5 g/kg; FeS0₄*7H₂O: 246 g/kg dry weight

PNEC Sediment (marine water): Fe: 49.5 g/kg; FeSO₄*7H₂O: 246 g/kg dry weight
Soil PNEC soil: Fe: 55.5 g/kg; FeSO₄*7H₂O: 276 g/kg dry weight

Oral (food chain) Iron is an essential trace element for fish, aquatic invertebrates and plants. A direct toxicity could not be demonstrated in tests. Therefore no PNEC was derived

8.2 Exposure Controls:
Goggles – Eye Protection: goggles/face shield to BS EN166.
Gloves – BS EN374 – chemical protection: physical barrier protection only
Respirators – BS approved protection device with P3 filter.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance grey/ brown microgranule
Odour slight metallic
pH 3.9 - 1% Dilution in water (CIPAC Method MT75.3)
Boiling point decomposes above 200-250°C
Melting point N/A
Flash point N/A
Flammability Mixture is not classed as flammable (EEC A10)
Autoflammability N/A
Explosivity Explosive properties are not expected (EEC A14)
Oxidising properties Oxidising properties are not expected (EEC A17)
Vapour Pressure N/A
Density Pour Density – ca. 1.09 g/ml, Tap Density ca.1.19mg/ml (CIPAC 186)
Solubility contains >50% insoluble material

9.1 Other Information: Dust Content –Nearly dust free (CIPAC MT171)

10. STABILITY & REACTIVITY

10.1 Reactivity: No known reactivity.
10.2 Stability: Stable under normal conditions.
10.3 Possibility of hazardous reactions Reacts with strong alkalis to release ammonia
10.4 Conditions to Avoid: Store away from heat and contact with strong oxidizing agents
10.5 Incompatible materials: strong oxidising agents, alkalis, nitrates and nitrites.
10.6 Hazardous Decomposition Products:
Decomposes at high temperatures producing toxic nitrogen and sulphur oxide fumes.

11. TOXICOLOGICAL INFORMATION

Mixture

Eye Irritation: Classified as irritation to eyes as a precautionary measure based on physical properties
Skin irritation: Mixture has been tested and is confirmed not to be a skin irritant.

Acute toxicity

LD/LC50 values that are relevant for classification:

Data form the Key Studies for iron sulphates and iron chlorides:

Oral LD50 132 - 881 mg Fe/kg (rat) (OECD 423)
Dermal LD50 >400 mg Fe/kg (rat) (OECD 402)
Inhalative LC50 no relevant data available

Data for ferrous sulphate heptahydrate:

Oral LD50 1185 mg/kg (rat)
LD50 >2000 mg/kg (rat) (OECD 401)
Dermal LD50 >1992 mg/kg (rat) derived)
Inhalative LC50 no relevant data available

Primary irritant effect:

on the skin: OECD 404: Irritant for skin and mucous membranes,
on the eye: OECD 405: Irritant effect.
Sensitization: OECD 429 (LLNA-test); No sensitizing effects.

Subacute to chronic toxicity:

Data of the Key Studies for iron sulphates and iron chlorides:

Oral NOAEL 57 - 65 mg Fe/kg/d (rat, 90 days) (not according to OECD)

Dermal NOAEL no relevant data available
Inhalative NOAEC no relevant data available

Data for ferrous sulphate heptahydrate

Oral NOAEL 284 - 324 mg/kg/d (rat, 90 days) (derived)
NOAEL 100 mg/kg/d (rat, 49 days)
Dermal NOAEC no relevant data available
Inhalative NOELL no relevant data available

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
There are no indications of CMR effects.

Specific target organ toxicity (STOT)
No specific target organ toxicity according to the criteria defined in Regulation (EC) No. 1272/2008.

Aspiration hazard
No data, not an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Mixture is classified for environmental effects in accordance with regulation 1272/2008 as amended.

Iron sulphate

Species	Time scale	Endpoint
Rat	Acute	1185mg FeSO ₄ ·7H ₂ O/kg bw
<i>Colin virginianus</i>	Acute	>1230.75 mg FeSO ₄ /kg bw/day
<i>Anas platyrhynchos</i>	Short-term	>683.1 mg FeSO ₄ /kg bw/day
<i>Oncorhynchus mykiss</i>	96 hr (flow-through)	45.1 mg FeSO ₄ /L
<i>Oncorhynchus mykiss</i>	21 d (semi static)	3.4 mg FeSO ₄ /L
<i>Daphnia magna</i>	48-hour (semi-static)	31.2 3.4 mg FeSO ₄ /L
<i>Daphnia magna</i>	21d (semi-static)	Less than 1.08 3.4 mg FeSO ₄ /L
Earthworm	Acute 14 days	4376 mg FeSO ₄ /kg soil > LC50 > 3829 mg FeSO ₄ /kg soil

Endpoints taken from EFSA peer review of Iron Sulphate (2012;10(1)2521)

12.2 Persistence and degradability:

Iron sulphate is an inorganic salt that dissociates in the soil solution to iron- and sulphate-ions. Both iron and sulphate-ions are naturally occurring components of terrestrial ecosystems.

12.3 Bioaccumulative potential: no data

12.4 Mobility in soil:

Iron sulphate - Mobile in soils and readily leached (Kf 2.6 – 21.1)
Under typical aerobic environmental conditions (pH 5 – pH 9), the highly soluble Fe (II) salts will be rapidly oxidised to less soluble Fe (III) oxides and hydroxides. Due to the low solubility of the oxide/hydroxide forms, the concentration of dissolved Fe in the soil solution is rather low (< 0.01 - 0.5 mg/L).

12.5 Results of PBT and vPvB: Not classified, not required.

12.6 Other adverse data: no data

13. DISPOSAL CONSIDERATIONS

Disposal route should not permit contamination of groundwater.

13.1 Waste treatment methods: Dispose of waste through a reputable waste disposal contractor in accordance with the Environmental Protection Act 1990.

14. TRANSPORT INFORMATION

14.1 UN number: Product is unclassified for transport

14.2 UN proper shipping name: Product is unclassified for transport

14.3 Transport hazard: Product is unclassified for transport

14.4 Packing group: Product is unclassified for transport

14.5 Environmental hazards: Product is unclassified for transport

14.6 Special precautions for user: No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Applicable for Maritime bulk transport only. Check with carrier.

15. REGULATORY INFORMATION

Not classified as dangerous.

15.1 Safety, health and environmental regulations/legislation specific to this substance:

This substance is classified and labelled in accordance with EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended) and the EC Fertiliser Regulations 2003.

15.2 Chemical Safety Assessment not undertaken for this material

16. OTHER INFORMATION

Reason for revision:

Replaces version dated October 2015. 1.4 Emergency contact amended.

Hazard statements in full:

H302: Harmful if swallowed

H315: Causes skin irritation

H319: Causes serious eye irritation

Liability

The product label provides information on the use of the product: do not use otherwise, unless you have assessed any potential hazard involved and the safety measures required. Prepared by VITAX LTD, for Health and Safety purposes from the best knowledge available at the time of printing.