

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Section 1: Identification of the Substance/Preparation and of the Company/Undertaking

Trade Name: **Bio-Chel Fe Liquid**
 Supplier: Engage Agro Europe Ltd
 Chorley Business & Technology Centre
 Euxton Lane,
 Euxton
 Chorley
 Lancashire PR7 6TE
 England
 Telephone: +44 (0) 1257 226590

Emergency Telephone

Emergency Telephone	Type of Assistance	Opening Hours
0845 4647	England and Wales: NHS Direct – Health advice and assistance	24 Hours
08454 242424	Scotland: NHS24	24 Hours

Section 2: Hazards Identification**Classification of the Substance or Mixture**

Directive 67/548/EC and Directive 1999/45/EC: In accordance with Directive 67/548/EC and Directive 1999/45/EC, the product is not classified as dangerous.

CLP Regulation (EC) n° 1272/2008: The product is not classified as dangerous according to CLP Regulation (EC) n° 1272/2008.

Label Elements

CLP Regulation (EC) n° 1272/2008:

Hazard Statements: Non-applicable
Precautionary Statements: P280: Wear protective gloves/protective clothing/eye protection/face 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
Supplementary information: EUH210: Safety data sheet available on request

Other Hazards

Other Hazards: Non-applicable

Safety Data Sheet

BIO-CHEL Fe Liquid



Last changed: 9/04/2015

Section 3: Composition / Information on Ingredients

Chemical Description: Miscellaneous products

Components:

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical Name/Classification		Concentration
CAS: 7720-78-7 EC: 231-753-5 Index: 026-003-00-7 REACH: 01-2119513203-57-XXXX	Iron Sulphate		5-<10%
	Self-classified		
	Directive 67/548/EC Xi: R36/38; Xn: R22 		
Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning 			

To obtain more information on the risk of the substances consult sections 8, 11, 12 and 16.

Section 4: First Aid Measures

Description of First Aid Measures

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the MSDS of this product.

- By Inhalation:** This product does not contain substances classified as dangerous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.
- By Skin Contact:** This product is not classified as dangerous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.
- By Eye Contact:** Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the MSDS of the product. open.
- By Consumption:** Do not induce vomiting, but if it does happen keep the head up to avoid inhalation. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute and delayed effects are indicated in sections 2 and 11.

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Indication of Any Immediate Medical Attention and Special Treatment Needed**Indication of Any Immediate Medical Attention and Special Treatment Needed:** Non-applicable**Section 5: Fire Fighting Measures****Extinguishing Media**

Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

Special Hazards Arising from the Substance Or Mixture

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and consequently, can present a serious health risk.

Advice for Firefighters

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit.) in accordance with Directive 89/654/EC.

Additional Provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

Section 6: Accidental Release Measures**Personal Precautions, Protective Equipment And Emergency Procedures**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

Environmental Precautions

This product is not classified as dangerous to the environment. Keep product away from drains, surface and underground water.

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Methods and Material for Containment and Cleaning Up

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

Reference to Other Sections

See sections 8 and 13.

Section 7: Handling and Storage

Precautions for Safe Handling

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See section 6 Methods and Material for Containment and Cleaning Up)

Conditions for Safe Storage, Including any Incompatibilities

A.- Technical measures for storage

Minimum Temp.:	0 °C
Maximum Temp.:	40 °C
Maximum time:	24 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see section 10 Incompatible Materials)

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Specific End Use(S)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Substances whose occupational exposure limits have to be monitored in the work environment

There are no environmental limits for the substances contained in the product

DNEL (Workers):

Identification		Short Exposure		Long Exposure	
		Systemic	Local	Systemic	Local
Iron sulphate CAS: 7720-78-7 EC: 231-753-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	0.57 mg/kg	Non-applicable	0.57 mg/kg	Non-applicable
	Inhalation	2.01 mg/m ³	Non-applicable	2.01 mg/m ³	Non-applicable

DNEL (Population):

Identification		Short Exposure		Long Exposure	
		Systemic	Local	Systemic	Local
Iron sulphate CAS: 7720-78-7 EC: 231-753-5	Oral	0.29 mg/kg	Non-applicable	0.29 mg/kg	Non-applicable
	Dermal	0.29 mg/kg	Non-applicable	0.29 mg/kg	Non-applicable
	Inhalation	0.5 mg/m ³	Non-applicable	0.5 mg/m ³	Non-applicable

PNEC:

Identification				
Iron sulphate CAS: 7720-78-7 EC: 231-753-5	STP	500 mg/L	Fresh water	Non-applicable
	Soil	55.5 mg/kg	Marine water	Non-applicable
	Intermittent	Non-applicable	Sediment (Fresh water)	49.5 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	49.5 mg/kg

Exposure Controls

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding ""CE marking"" in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see section 7 Precautions for Safe Handling

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

Safety Data Sheet**BIO-CHEL Fe Liquid**

Last changed: 9/04/2015

B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.

C.- Specific protection for the hands

Non-applicable

D.- Ocular and facial protection

Non-applicable

E.- Bodily protection

Non-applicable

F.- Additional emergency measures

It is not necessary to take additional emergency measures.


Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see section 7 Precautions for Safe Handling part D.

Section 9: Physical and Chemical Properties**Information on Basic Physical and Chemical Properties**

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Characteristic
Colour:	Brown 
Odour:	Characteristic

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	1230 - 1250 kg/m ³
Relative density at 20 °C:	1.23 - 1.25
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

pH: 2 - 3
 Vapour density at 20 °C: Non-applicable *
 Partition coefficient n-octanol/water 20 °C: Non-applicable *
 Solubility in water at 20 °C: Non-applicable *
 Solubility property: Miscible
 Decomposition temperature: Non-applicable *
 Melting point/freezing point: Non-applicable *

Flammability:

Flash Point: Non Flammable (>60 °C)
 Autoignition temperature: Non-applicable *
 Lower flammability limit: Non-applicable *
 Upper flammability limit: Non-applicable *

Other Information

Surface tension at 20 °C: Non-applicable *
 Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

Section 10: Stability and Reactivity

Reactivity

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

Chemical Stability

Chemically stable under the conditions of storage, handling and use.

Possibility of Hazardous Reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

Conditions to Avoid

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Incompatible Materials

Acids	Water	Combustive materials	Combustive materials	Others
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Hazardous Decomposition Products

See section 10 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

Section 11: Toxicological Information**Information on Toxicological Effects**

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion:

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.

B- Inhalation:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.

C- Contact with the skin and the eyes:

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for skin contact. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.

E- Sensitizing effects:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensibilising effects. For more information see section 3.

F- Specific target organ toxicity (STOT)-time exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Other information: Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Iron sulphate	LD50 oral	500 mg/kg (ATEi)	Rat
CAS: 7720-78-7	LD50 dermal	Non-applicable	
EC: 231-753-5	LC50 inhalation	Non-applicable	

Section 12: Ecological Information

Toxicity:

Not available

Persistence and Degradability

Not available

Bioaccumulative Potential

Not available

Mobility in Soil

Not available

Results of PBT and vPvB Assessment

Not applicable

Other Adverse Effects

Not described

Section 13: Disposal Considerations

Waste Treatment Methods

Code	Description	Waste class (Directive 2008/98/EC)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Non dangerous

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2000/532/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue.

We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated Community legislation: Directive 2008/98/EC, 2000/532/EC: Commission Decision of 3 May 2000

Section 14: Transport Information

This product is not regulated for transport (ADR/RID,IMDG,IATA)

Section 15: Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Non-applicable

Regulation (EC) 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):

Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation: Non-applicable

Chemical Safety Assessment

The supplier has not carried out evaluation of chemical safety.

Safety Data Sheet

BIO-CHEL Fe Liquid

Last changed: 9/04/2015

Section 16: Other Information

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 453/2010)

Modifications related to the previous security card which concerns the ways of managing risks. :

Non-applicable

Text of R-phrases considered in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

Directive 67/548/EC and Directive 1999/45/EC:

R22: Harmful if swallowed
R36/38: Irritating to eyes and skin

CLP Regulation (EC) n° 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed
Eye Irrit. 2: H319 - Causes serious eye irritation
Skin Irrit. 2: H315 - Causes skin irritation

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://esis.jrc.ec.europa.eu>
<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- CL50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol–water partition coefficient
- Koc: Partition coefficient of organic carbon

Safety Data Sheet**BIO-CHEL Fe Liquid**

Last changed: 9/04/2015

VENDOR NOTES

The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.