
VALAGRO SDS according to HCS APPENDIX D TO §1910.1200

Date: December 01, 2015 Rev. 1.0

Product: 12105

Code: Brexil Nutre

Print Date: December 1, 2015

SAFETY DATA SHEET

Brexil Nutre

SECTION 1: IDENTIFICATION

1.1. Product Identifier used on the label

Trade name: Brexil Nutre

1.2. Other means of identification

Trade code: 12105

1.3. Recommended use of the chemical and restrictions on use:

Fertilizer

1.4. Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Produced and packed by:

VALAGRO Spa

Via Cagliari, 1 Zona Industriale

66041 Atessa (CH) ITALY

Tel. (+39) 08728811 Fax (+39) 0872881382

www.valagro.com

Distributed and guaranteed by:

Valagro USA Inc.

19500 Hwy 249, suite 245 - Houston TX 77070

Tel (281) 664 8700 - Fax (281) 664 8701

Competent person responsible for the safety data sheet:

regulatory@valagro.com


1.4. Emergency phone number


Valagro USA Inc

Tel (281) 664 8700 - Fax (281) 664 8701

SECTION 2: HAZARD(S) IDENTIFICATION

2.1. Classification of the chemical in accordance with paragraph (d) of §1910.1200;

 Danger, Eye Dam. 1, Causes serious eye damage.

 Warning, STOT RE 2, May cause damage to brain through prolonged or repeated exposure per inhalation

2.2. Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200:

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Danger

Causes serious eye damage.

May cause damage to brain through prolonged or repeated exposure per inhalation

Wear safety goggles and face shield.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor

Do not breathe dust/fume/gas/mist/ vapors/spray.

Get medical advice/attention if you feel unwell.

Dispose of contents/container in accordance with local/regional/national/international regulations

First Aid:

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

Inhalation : Remove to fresh air. Get medical attention for any breathing difficulty.

Eye Contact : Rinse cautiously with water for several minutes holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or physician.

Ingestion : Rinse mouth with water. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person. Immediately call a doctor

Skin Contact: Remove all contaminated clothing. Rinse with plenty of soap and water.

2.3. Hazards not otherwise classified that have been identified during the classification process:

None

2.4. Ingredient(s) with unknown acute toxicity:

None component with unknown acute toxicity is present in the mixture


SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

3.1 Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

15% - 20% manganese sulphate CAS: 7785-87-7, EC: 232-089-9

 Eye Damage cat.1, Causes serious eye damage

 STOT RE cat. 2, May cause damage to the brain through prolonged or repeated exposure

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per inhalation.

12.5% - 15% zinc sulphate CAS: 7446-19-7, EC: 231-793-3

☠ Eye Damage cat.1, Causes serious eye damage

☠ Oral acute toxicity cat 4, Harmful if swallowed

5% - 7% iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5

☠ Eye irritant cat. 2A , Causes serious eye irritation

☠ Skin irritant cat. 2, Causes skin irritation.

☠ Oral acute toxicity cat 4, Harmful if swallowed

SECTION 4: FIRST AID MEASURES

4.1. Description of necessary measures:

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Never give anything by mouth to an unconscious person; if person is conscious rinse mouth with water and then give plenty of water to drink. Do not induce vomiting unless instructed to do so by medical personnel. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms/effects, acute and delayed:

No data available for the mixture

Possible symptoms that may occur:

Inhalation: may cause irritation to the respiratory tract

Symptoms: cough, shortness of breath

Ingestion:

The product dissolved in water or in presence of moisture, cause an acid reaction and if swallowed can cause irritation and burns of the mouth, throat and digestive tract.

Symptoms: vomiting, abdominal pain, gastrointestinal disorders

Contact with skin:

May cause irritation to the skin

Symptoms: redness, itching, pain.

Contact with eyes:

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causes serious eye damage

Symptoms include pain and redness

4.3. Indication of immediate medical attention and special treatment needed:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

No data available

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Suitable (and unsuitable) extinguishing media.

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces smoke containing carbon oxides, nitrogen oxides, sulfur oxides

5.3. Special protective equipment and precautions for fire-fighters.

Use suitable breathing apparatus, protective clothing, eye protection and gloves resistant to chemicals according to EN469

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothes giving a total skin protection, gloves and safety glasses.

See protective measures under point 7 and 8.

Ensure adequate ventilation, move people in a safe place.

Avoid dust generation

Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition.

6.2. Methods and material for containment and cleaning up

Collect the product for example using shovel and broom

Avoid raising dust

Wash with plenty of water and adsorb with organic material or sand collect the product absorbed for example using shovel and broom

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Dilute with water and retain contaminated wash water and dispose in authorized facilities or pick up in clean plastic labeled containers and reuse as fertilizer.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

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Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep in the original package in a cool well-ventilated place, away from sources of heat

Keep away from food, drink and feed.

Incompatible materials:

Bases, oxidizing and reducing agents.

Instructions as regards storage premises:

Adequately ventilated premises.

Avoid dust generation.

Dusts at sufficient concentrations can form explosive mixtures with air

Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values:

No data available for the mixture.

- TWA Zinc (Zn) 8 hour-TWA: 1 mg/m³, 15 min-STEL: 2 mg/m³ (ACGIH 1991)

- TWA Iron soluble salts (Fe) : 1 mg/m³

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): 1 mg/m³ TWA

- TWA Manganese (Mn) inorganic compounds

8-hour TWA: 0.2 mg/m³

NIOSH REL: 1 mg/m³; (ST) 3 mg/m³

ACGIH 2015 TLV (h): 0.02 mg/m³ (resp.)

0.1 mg/m³ (IHL)

(for elemental and inorganic compounds)

8.2. Appropriate engineering controls.

It is recommended that the workers wear appropriate gloves, protective glasses and use a anti-powder mask

8.3. Individual protection measures, such as personal protective equipment:

Please observe the usual precautionary measures for handling of chemicals.

The personal protective equipment must be compliant to the regulation UNI –EN in force

Eye protection:

Use close fitting safety goggles according to the standard EN 166, don't use eye lens

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. PVC, neoprene according to EN 374

Respiratory protection:

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Use anti-powder mask with P2 (FFP2) filters according to the EN 149:2001

The powder exposition limit must be respected.

Thermal Hazards:

None Known

Environmental exposure controls:

None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown microgranules
Odour:	coffee
Odour threshold:	N.A.
pH 1% water solution at 68°F:	3.1
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	not applicable, solid
Flash point:	N.A.
Evaporation rate:	not applicable, solid
Flammability (Solid/gas):	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour pressure:	not applicable, solid
Vapour density:	not applicable, solid
Apparent density:	0.5-0.6 Kg/dm ³
Solubility in water:	300 g/l at 68°F
Lipid solubility:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable under normal conditions of storage and use

10.2. Chemical stability

Stable under normal conditions of storage and use

10.3. Possibility of hazardous reactions

The product can release gaseous ammonia if in contact with alkaline substances such as lime

10.4. Conditions to avoid

Avoid high temperatures

Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition.

10.5. Incompatible materials

Bases, oxidizing and reducing agents.

10.6. Hazardous decomposition products

In case of fire and high temperatures can develop carbon oxides, nitrogen oxides, sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact);

Inhalation:

may cause irritation to the respiratory tract; high concentrations of dust in the air may cause irritation of respiratory tract.

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Nitrogen oxides (NO_x) produced by heating the product at high temperatures may cause pulmonary edema.

Ingestion:

The product dissolved in water or in presence of moisture, cause an acid reaction and if swallowed can cause irritation and burns of the mouth, throat and digestive tract.

Contact with skin:

May cause irritation to the skin

Contact with eyes:

causes serious eye damage

11.2 Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation:

Symptoms: cough, shortness of breath

Ingestion:

Symptoms: vomiting, abdominal pain, gastrointestinal disorders.

Contact with skin:

Symptoms: redness, itching, pain.

Contact with eyes:

Symptoms include pain and redness

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure;

See section 11.2

11.4 Numerical measures of toxicity (such as acute toxicity estimates).

No data available for the mixture

Toxicological information of the main substances found in the mixture:

a) acute toxicity:

- manganese sulphate CAS: 7785-87-7, EC: 232-089-9

LD50 oral rat = 2150 mg/kg bw

LC50 Inhalation > 4.98 mg/l

Skin: Manganese sulphate, absorption through skin is unlikely

- Zinc sulphate CAS: 7446-19-7, EC: 231-793-3

LD 50 Oral Rat = 574 mg/Kg

LD50 Dermal Rat > 2000 mg/Kg

Inhalation: N.A.

- iron (II) sulfate CAS: 7720-78-7, EC: 231-753-5

LD50 > 400 mg Fe/kg bw

LD50 Dermal Rat > 2000 mg/Kg

LC50 Inhalation: N.A.

b) skin corrosion/irritation:

- manganese sulphate CAS: 7785-87-7, EC: 232-089-9

In vivo test on rabbit OECD 404: not irritant (Ref. Pooles A (2009))

- Zinc sulphate CAS: 7446-19-7, EC: 231-793-3

Skin: not irritant (Van Huygevoort, 1999b; Lansdown, 1991)

- iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5

Iron sulphate solid

Test OECD TG 404 and GLP rabbit

Result: irritant, Skin Irrit. 2 H315

c) serious eye damage/irritation:

- manganese sulphate CAS: 7785-87-7, EC: 232-089-9

In vivo test on rabbit OECD 405: Causes serious eye damage - Ref. Pooles A (2009)

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- Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
strong irritant (Van Huygevoort, 1999f), Causes serious eye damage
- iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
Eye Irrit. 2A H319 Causes severe eye irritation.

- d) respiratory or skin sensitisation:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
Skin: no sensitizing according to OECD 429
Respiratory system: N.A.
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
no sensitizing effect known (Van Huygevoort, 1999i, Ikarashi et al, 1992)
 - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
Skin: Not classified as a sensitizer
Respiratory system: N.A.

- e) germ cell mutagenicity:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
Result: negative (read-across results in vivo and in vitro test Manganese chloride)
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
No biologically relevant genotoxic activity (based on cross-reading between Zn compounds; no classification for mutagenicity required) (Chemical Safety report (CSR) zinc sulphate. 2010)
 - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
not classified as mutagenic

- f) carcinogenicity:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
not carcinogenic
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
not carcinogenic
 - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
not carcinogenic

- g) reproductive toxicity:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
not classified
 - Zinc (II) sulfate CAS: 7446-19-7, EC: 231-793-3
not classified
 - iron (II) sulfate CAS: 7720-78-7, EC: 231-753-5
Iron sulphate heptahydrate (Ref. MHLW, Japan, 2003)
NOAEL Fertility rat ≥1000 mg/kg body weight/day
≥200 mg Fe/kg bw/day
NOAEL Development rat ≥1000 mg/kg body weight/day
≥200 mg Fe/kg bw/day

- h) STOT-single exposure:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
not classified
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
not classified - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5

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No data available

- i) STOT-repeated exposure
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
STOT RE 2 May cause damage to the brain through prolonged or repeated exposure by inhalation.
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
Not classified
 - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
No data available

- j) aspiration hazard:
 - manganese sulphate CAS: 7785-87-7, EC: 232-089-9
STOT RE 2 May cause damage to the brain through prolonged or repeated exposure by inhalation.
 - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3
No data available
 - iron (II) sulphate CAS: 7720-78-7, EC: 231-753-5
No data available

11.5 Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA:

None

SECTION 12: ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

The release of large amounts may cause a decreasing of the pH value and can have negative effects on aquatic environments.

Toxicological information of the mixture:
no data available

Toxicological information of the main substances found in the mixture:

- manganese sulphate CAS: 7785-87-7, EC: 232-089-9

Aquatic compartment	Results	Substance	Reference
Short-term toxicity: <i>Oncorhynchus mykiss</i> Fresh water	LC50 (96 h): 14.5 mg/L Mn	Test material Manganese sulphate monohydrate	Davies PH (1980)
Long-term toxicity: <i>Oncorhynchus mykiss</i> , fresh water	NOEC (4 mo): 0.6 mg/L Mn	Test material (EC name): manganese sulphate	Davies P & Brinkman S (1994)

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Short-term toxicity: Daphnia magna, fresh water	LC50 (48 h): 9.8 mg/L dissolved (meas. (arithm. mean)) based on: as Mn ²⁺	Test material (EC name): manganese chloride	Biesinger KE & Christensen GM (1972)
Long-term toxicity: <i>Daphnia magna</i> , salt water	LC50 (3 settimane): 5700 µg/L dissolved (meas. (arithm. mean)) based on: mortality	Test material (EC name): manganese chloride	Biesinger KE & Christensen GM (1972)
<i>Algae: Desmodesmus subspicatus</i> (algae, Growth Inhibition Test), fresh water	EC50 (72 h): 61 mg/L test mat. (nominal) based on: growth rate	Test material manganese sulphate monohydrate	Vryenhoef H (2010)

- Zinc sulphate, CAS: 7733-02-0, EC: 231-793-3

EC50 per zinc sulphate heptahydrate:

per pH <7= 1.82 mg Zn/l (48 ore - Test su *C. dubia* utilizzando il protocollo standard US EPA 821-R-02-012 Ref.: Hyne et al 2005)

per pH > 7-8,5= 3,73 mg Zn/l (72 ore - Selenastrum capricornutum Test = pseudokirchneriella subcapitata) utilizzando il protocollo standard OCSE 201; riferimento: Van Ginneken, 1994)

Tossicità per i microrganismi STP:

PNEC = 5,2 mg Zn / l (Dutka et al, 1983).

- Iron sulfate (II) Numero Index: 026-003-00-7, CAS: 7782-63-0, EC: 231-753-5

Short-term toxicity data for fish

Iron salt	Test organism	Duration	Endpoints	LC50 (mg/l) ¹	Reliability	Reference
FeSO ₄	<i>Salvelinus fontinalis</i>	96 h	Survival (pH 5.5)	0.41	2	Decker and Menendez (1975)
			Survival (pH 6.0)	0.48		
			Survival (pH 7.0)	1.8 (m.d)		

Long-term toxicity data for fish:

Iron salt	Test organism	Duration	Endpoints	NOEC (mg/L) ¹	LOEC (mg /L) ¹	Reliability	Reference
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Iron salt	Test organism	Duration	Endpoints	NOEC (mg/L) ¹	LOEC (mg /L) ¹	Reliability	Reference
FeSO ₄ ·7H ₂ O	<i>Lampetra fluviatilis</i> (Lamprey)	72 h	Hatching	-	1.1 (EC50) (n.t)	2	Myllynen et al. (1997)
FeSO ₄ neutralised with stoichiometric amount of calcium hydroxide	<i>Pimephales promelas</i>	12 months	Growth Hatching (at pH 6.9-7.2)	0.24 (n.t)	1.5 (n.t)	2	Smith et al. (1973)

Short-term toxicity data for aquatic invertebrates

Iron salt	Test organism	Duration	Endpoints	EC50 (mg/l) ¹	Reliability	Reference
FeSO ₄	<i>Daphnia magna</i>	24 h	Immobility (pH 7.6)	5.3 (n.t)	2	Lilius et al. (1995)

Chronic toxicity data for iron salts

Iron salt	Test organism	Duration	Endpoints	NOEC (mg /L) ¹	LOEC (mg /L) ¹	Reliability	Reference
FeSO ₄ ·7H ₂ O	<i>Daphnia magna</i>	21 days	Reproduction (at pH 7.0-8.5)	10 (n.ts) 2 (n.t)	13 (n.ts) 2.6 (n.t)	1	MOE, Japan (2002)

12.2. Persistence and degradability:

No data available for the mixture;

The mixture contain Lignisulfonato ammonium that is a natural product biodegradable

Not applicable for inorganic salts such as manganese sulphate, zinc sulphate, iron sulphate

12.3. Bioaccumulative potential

The product does not contain any bioaccumulative substances

12.4. Mobility in soil

The product is soluble and mobile in both terrestrial and aquatic compartments

In general, the mobility in the soil of the microelements in the mixture is influenced by several factors such as pH, CO₂ concentration, redox conditions, availability of organic and inorganic

12.5. Other adverse effects (such as hazardous to the ozone layer).

None known

SECTION 13: DISPOSAL CONSIDERATIONS

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- 13.1. Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:
- Product :Recover if possible. In so doing, comply with the local and national regulations currently in force.
 - Packaging: Dispose according to regulations.

SECTION 14: TRANSPORT INFORMATION



14.1. UN number

ADR-UN Number: 3077
IATA-UN Number: 3077
IMDG-UN Number: 3077

14.2. UN proper shipping name

ADR-Shipping Name: SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (Manganese sulphate, zinc sulphate)
IATA-Shipping Name: SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (Manganese sulphate, zinc sulphate)
IMDG-Shipping Name: SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (Manganese sulphate, zinc sulphate)

14.3. Transport hazard class(es)

ADR-Class: 9
ADR - Hazard identification number: 90
IATA-Class: 9
IATA-Label: no data available
IMDG-Class: 9

14.4. Packing Group

ADR-Packing Group: III
IATA-Packing group: III
IMDG-Packing group: III

14.5 Environmental hazards

ADR-Environmental Pollutant: Yes
IMDG-Marine pollutant: No

14.6. Special Precautions for User

ADR-Subsidiary risks: -
ADR-S.P.: 274 335 375 601
ADR-Codice di restrizione in galleria: (E)
IATA-Passenger Aircraft: 956
IATA-Subsidiary risks: -
IATA-Cargo Aircraft: 956
IATA-S.P.: A97 A158 A179
IATA-ERG: 9L
IMDG-EMS: F-A , S-F
IMDG-Subsidiary risks: -
IMDG-Storage category: Category A

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IMDG-Storage notes: -

- 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not transported in bulk

SECTION 15: REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations specific for the product in question.

Hazard Communication Standard (HCS) Haz Com 2012

OSHA, 29 CFR 1910.1200(g) and Appendix D. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.

Hazard Communication Standard

United Nations Recommendations on the Transport of Dangerous Goods.

OSHA Permissible Exposure Limit

[29 CFR 1926.55 Appendix A](#)

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV)

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL)

Chemical Abstracts Service (CAS) Registry Number

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: Manganese sulphate, Zinc sulphate, Iron sulphate.

SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: no substances listed.

Section 313 – Toxic chemical list: no substances listed.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

None

CAA - Clean Air Act

CAA listed substances:

Iron sulphate

CWA - Clean Water Act

CWA listed substances:

Iron sulphate

SECTION 16: OTHER INFORMATION , INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of preparation of the SDS: revision 1.0, date December 01, 2015.

This document was prepared by a competent person who has received appropriate training.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

N.A. no data available

ADR: European Agreement concerning the International Carriage of

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CAS:	Dangerous Goods by Road. Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.