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VALAGRO SDS according to HCS APPENDIX D TO §1910.1200

Date: April 09, 2015 Rev. 1.0

Product: 11285

Code: Brexil Zn

Print Date: 5 June 2015

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## SAFETY DATA SHEET

### Brexil Zn

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#### SECTION 1: IDENTIFICATION

1.1. Product Identifier used on the label

Trade name: Brexil Zn

1.2. Other means of identification

Trade code: 11285

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](http://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](mailto:regulatory@valagro.com)

1.4. Emergency phone number

Valagro USA Inc

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

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#### SECTION 2: HAZARD(S) IDENTIFICATION

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



Warning, Eye Irrit. 2A, Causes serious eye irritation

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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#### Warning

Causes serious eye irritation

Wash hands thoroughly after handling

Wear safety goggles and face shield.

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

If eye irritation persists: Get medical advice/attention.

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. If irritation occurs and if symptoms persist, call a 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

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

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

21% - 26% 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

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### 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.

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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:

Do not under any circumstances induce vomiting. Rinse mouth with water and if the person is conscious give water to drink . **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:

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:

Can cause irritation to the skin

Symptoms: redness, itching, pain.

Contact with eyes:

causes serious eye irritation

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

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## **SECTION 5. FIRE-FIGHTING MEASURES**

5.1. Suitable (and unsuitable) extinguishing media.

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

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.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothes giving a total skin protection, latex 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.

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## 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.

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.

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## 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/m<sup>3</sup>, 15 min-STEL: 2 mg/m<sup>3</sup> (ACGIH 1991)

8.2. Appropriate engineering controls.

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

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



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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. P.V.C., neoprene or rubber according to EN 374

Respiratory protection:

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

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown microgranules
Odour:	coffee
Odour threshold:	N.A.
pH 1% water solution at 68°F:	3.5
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:	0.6-0.7 Kg/dm <sup>3</sup>
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:	not applicable, solid

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## 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

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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, metal oxides

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## 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.

Nitrogen oxides (NO<sub>x</sub>) 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:

Cause irritation to the skin

Contact with eyes:

causes serious eye irritation

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).

Toxicological information for the mixture:

Acute oral Toxicity study:

LD<sub>50</sub> rat > 2000 mg/Kg (OECD guidelines TEST No 423)

Acute eye irritation/corrosion study:

Test on rabbit OECD 405: Irritant

Toxicological information of the main substances found in the mixture:

a) acute toxicity:

- 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.

b) skin corrosion/irritation:

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

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

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- c) serious eye damage/irritation:
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
strong irritant (Van Huygevoort, 1999f), Causes serious eye damage
- d) respiratory or skin sensitisation:
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
no sensitizing effect known (Van Huygevoort, 1999i, Ikarashi et al, 1992)
- e) germ cell mutagenicity:
  - 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)
- f) carcinogenicity:
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
not carcinogenic
- g) reproductive toxicity:
  - Zinc (II) sulfate CAS: 7446-19-7, EC: 231-793-3  
not classified
- h) STOT-single exposure:
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
not classified
- i) STOT-repeated exposure
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
Not classified
- j) aspiration hazard:
  - Zinc (II) sulphate CAS: 7446-19-7, EC: 231-793-3  
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.

Ecotoxicological information for the mixture:

Acute toxicity

- Zebra fish (Danio rerio)	LC50 96h	> 100 mg/L (OECD 203)
- Daphnia Magna	IC50 48h	= 24.4 mg/L (OECD 202)
- Green algae	ErC 50 72 h	= 0.86 mg/L (OECD 201)
	EyC 50 72 h	= 0.67mg/L (OECD 201)

### 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 iron sulfate

### 12.3. Bioaccumulative potential

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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, CO<sub>2</sub> 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****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. (zinc sulphate)  
IATA-Shipping Name: SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (zinc sulphate)  
IMDG-Shipping Name: SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (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



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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  
IMDG-Storage notes: -

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

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## 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: zinc 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:

None.

CWA - Clean Water Act

CWA listed substances:

Iron sulphate

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

Date of preparation of the SDS: revision 1.0, date 2015-04-09.

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

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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 Dangerous Goods by Road.
CAS:	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.