SAFETY DATA SHEET

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

1.1. Product identifier

Product name : FERTIGOFOL ULTRA

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

Use for agriculture (nutrients/ trace elements for plants)

1.3. Details of the supplier of the safety data sheet

Registered company name : AGRONUTRITION SAS..

Address : Parc Activestre - 3 avenue de l'Orchidée.31390.CARBONNE.FRANCE.

Telephone : +33 (0)5 61 97 85 00. Fax : +33 (0)5 61 97 85 01.

fds-msds@agro-nutrition.fr

http://www.agronutrition.com

Distributed by: DeSangosse New Zealand Ltd, PO Box113 Te Awamutu, 3841.Ph:07 827 4856, Fax:07 827 4806 infonz@desangosse.com

1.4. Emergency telephone number : +0800 764 766 .

Association/Organisation : New Zealand National Poisons Centre : poisons@otago.ac.nz.

HSNO Approval Number : HSR002571 : Fertilisers (Subsidiary Hazard) Group Standard 2017

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS compliant / HSNO compliant

Skin irritation, Category 3 (Skin Irrit. 3, H316) / HSNO Classification : 6.3B

Eye irritation, Category 2A (Eye Irrit. 2A, H319) / HSNO Classification : 6.4A

Hazardous to the aquatic environment - Acute hazard, Category 3 (Aquatic Acute 3, H402) / HSNO Classification : 9.1D

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412) / HSNO Classification : 9.1C

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

GHS compliant.

Hazard pictograms :

GHS07

Signal Word :

WARNING

Hazard statements :

H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements - General :

P102	Keep out of reach of children.

Precautionary statements - Prevention :

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response :

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.

Precautionary statements - Disposal :

P501	Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards

No data available.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	GHS	Note	%
CAS: 7447-40-7 EC: 231-211-8 POTASSIUM CHLORIDE	Wng Acute Tox. 5, H303		2.5 <= x % < 10
CAS: 68333-79-9 EC: 269-789-9 POLYPHOSPHATE D'AMMONIUM 10-34	GHS07 Wng Acute Tox. 4, H302 Eye Irrit. 2B, H320		2.5 <= x % < 10
CAS: 64-02-8 EC: 200-573-9 TETRASODIUM ETHYLENE DIAMINE TETRAACETATE	GHS07, GHS05 Dgr Acute Tox. 4, H302 Eye Dam. 1, H318 Acute Tox. 4, H332		2.5 <= x % < 10
CAS: 584-08-7 EC: 209-529-3 REACH: 01-2119532646-36-xxxx POTASSIUM CARBONATE	GHS07 Wng Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335		0 <= x % < 2.5
CAS: 10377-60-3 EC: 233-826-7 MAGNESIUM NITRATE	GHS07 Wng Eye Irrit. 2, H319		0 <= x % < 2.5
CAS: 7779-88-6 EC: 231-943-8 REACH: 05-2117368463-38-xxxx ZINC(II) NITRATE	GHS07, GHS09, GHS03 Dgr Ox. Liq. 2, H272 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0 <= x % < 2.5
CAS: 7758-99-8 EC: 231-847-6 COPPER SULPHATE PENTAHYDRATE	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 M Acute = 10 Aquatic Chronic 1, H410 M Chronic = 10		0 <= x % < 2.5

(Full text of H-phrases: see section 16)

SECTION 4 : FIRST AID MEASURES

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

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

Remove the victim to fresh air. In case of respiratory problems, consult a doctor/medical service.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- foam
- powder
- carbon dioxide (CO_2)

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- nitrogen oxide (NO)
- nitrogen dioxide (NO_2)

5.3. Advice for firefighters

No data available. HAZCHEM CODE : Not Applicable

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

See section 1 for information about emergency contact.

Se section 13 for obtain additional information on waste treatment.

See section 8 for information on personal protection equipments.

See section 7 for information on safe handling.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid skin and eye contact with this mixture.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No data available.

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

Final use:	**Workers.**
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	2.5 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term local effects.
DNEL :	2.5 mg of substance/m3

Final use:	**Consumers.**
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	1.5 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term local effects.
DNEL :	1.5 mg of substance/m3

Predicted no effect concentration (PNEC):

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

Environmental compartment:	Fresh water.
PNEC :	2.2 mg/l
Environmental compartment:	Sea water.
PNEC :	0.22 mg/l
Environmental compartment:	Intermittent waste water.

PNEC :	1.2 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.72 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	43 mg/l

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Fluid liquid.

Important health, safety and environmental information

pH (aqueous solution) :	8.4+/-0.6 (10g/l)
pH :	8.40 +/-0.6.
	Slightly basic.

Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	1200 (+/-1.5%) g/dm3
Water solubility :	Soluble.
Melting point/melting range :	Not relevant.
Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid :

- frost

10.5. Incompatible materials

Keep away from :

- strong oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- nitrogen oxide (NO)
- nitrogen dioxide (NO2)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

May cause reversible damage to the skin; namely the formation of erythema and eschar following exposure up to four hours.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

11.1.1. Substances

Acute toxicity :

COPPER SULPHATE PENTAHYDRATE (CAS: 7758-99-8)

Oral route :	LD50 = 481 mg/kg Species : Rat

MAGNESIUM NITRATE (CAS: 10377-60-3)

Oral route :	LD50 > 5000 mg/kg Species : Rat

POTASSIUM CARBONATE (CAS: 584-08-7)

Oral route :	LD50 > 2000 mg/kg Species : Rat
Dermal route :	LD50 > 2000 mg/kg Species : Rabbit

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

Oral route :	LD50 = 2000 mg/kg Species : Rat

POLYPHOSPHATE D'AMMONIUM 10-34 (CAS: 68333-79-9)

Oral route :	300 < LD50 <= 2000 mg/kg

Species : Rat
OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

Inhalation route (n/a) : LC50 > 4.85 ppm
Species : Rat
OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)

POTASSIUM CHLORIDE (CAS: 7447-40-7)
Oral route : LD50 = 3020 mg/kg
Species : Rat

Skin corrosion/skin irritation :

POLYPHOSPHATE D'AMMONIUM 10-34 (CAS: 68333-79-9)
OECD Guideline 439 (In Vitro Skin Irritation, Reconstructed Human Epidermis Test Method)

11.1.2. Mixture

Skin corrosion/skin irritation :

Irritation : Causes mild skin irritation.

SECTION 12 : ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

POTASSIUM CARBONATE (CAS: 584-08-7)
Crustacean toxicity : EC50 = 200 mg/l
Species : Daphnia pulex
Duration of exposure : 48 h

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)
Fish toxicity : LC50 > 100 mg/l
Species : Lepomis macrochirus
Duration of exposure : 96 h
EPA OPP 72-1 (Fish Acute Toxicity Test)

NOEC = 36.9 mg/l
Duration of exposure : 35 days
OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test)

Crustacean toxicity : EC50 > 100 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

NOEC = 25 mg/l
Species : Daphnia sp.
Duration of exposure : 21 days
OECD Guideline 211 (Daphnia magna Reproduction Test)

Algae toxicity : ECr50 > 100 mg/l
Species : Scenedesmus sp.
Duration of exposure : 72 h

POLYPHOSPHATE D'AMMONIUM 10-34 (CAS: 68333-79-9)
Fish toxicity : LC50 > 500 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 813 mg/l

Species : Daphnia magna
Duration of exposure : 48 h

POTASSIUM CHLORIDE (CAS: 7447-40-7)

Fish toxicity : LC50 = 2300 mg/l
Species : Leuciscus idus
Duration of exposure : 48 h

Crustacean toxicity : EC50 = 825 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity : ECr50 = 2500 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

POTASSIUM CARBONATE (CAS: 584-08-7)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

POLYPHOSPHATE D'AMMONIUM 10-34 (CAS: 68333-79-9)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

POTASSIUM CHLORIDE (CAS: 7447-40-7)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

Five-day biochemical oxygen demand : DBO5 20 g/kg

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

12.3.1. Substances

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

Octanol/water partition coefficient : log Koe = -13

Bioaccumulation : BCF = 1.8
Species : Lepomis macrochirus (Fish)

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

The appropriate waste management of the mixture and/or its container must be determined in accordance with local regulations.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

14.1. UN number

-

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 user

-

SECTION 15 : REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The following regulations have been used:

- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), review no. 5 (2013)

- Container information:

No data available.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

HSNO Approval Number : HSR002571 : Fertilisers (Subsidiary Hazard) Group Standard 2017

HSNO Classifications : 6.3B, 6.4A, 9.1D, 9.1C

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations :

DNEL : Derived No-Effect Level
PNEC : Predicted No-Effect Concentration
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
GHS07 : Exclamation mark
PBT: Persistent, bioaccumulable and toxic.
vPvB : Very persistent, very bioaccumulable.