

BUD COMPLEX

SAFETY DATA SHEET

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

1.1. Product identifier

Product name : BUD COMPLEX

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

Use for agriculture. Agricultural fertilizer containing micro-organisms.

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 : .

fds-msds@agro-nutrition.fr

Distributed by: DeSangosse New Zealand Ltd, PO Box113Te Awamutu, 3841.Ph:07 827 4856, Fax:07 827 4806infonz@desangosse.com

1.4. Emergency telephone number : +0800 764 766.

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

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS compliant.

Acute oral toxicity, Category 5 (Acute Tox. 5, H303).

Skin corrosion, Category 1B (Skin Corr. 1B, H314).

Serious eye damage, Category 1 (Eye Dam. 1, H318).

Reproductive toxicity, Category 1B (Repr. 1B, H360).

Hazardous to the aquatic environment - Acute hazard, Category 2 (Aquatic Acute 2, H401).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

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 :



GHS05



GHS08



GHS09

Signal Word :

DANGER

Product identifiers :

CAS 4861-19-2

PHOSPHATE UREA

CAS 7446-19-7

ZINC SULPHATE (HYDROUS) (MONO-, HEXA- AND HEPTA HYDRATE)

CAS 10043-35-3

BORIC ACID

Hazard statements :

H303

May be harmful if swallowed.

H314

Causes severe skin burns and eye damage.

H360

May damage fertility or the unborn child .

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H411	Toxic to aquatic life with long lasting effects.
Precautionary statements - General :	
P102	Keep out of reach of children.
Precautionary statements - Prevention :	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statements - Response :	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
Precautionary statements - Disposal :	
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards

In use, may form flammable/explosive dust-air mixture.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures****Composition :**

Identification	GHS	Note	%
CAS: 4861-19-2 EC: 225-464-3 PHOSPHATE UREA	GHS05 Dgr Acute Tox. 5, H303 Skin Corr. 1B, H314		10 <= x % < 25
CAS: 7446-19-7 EC: 231-793-3 REACH: 01-2119474684-27 ZINC SULPHATE (HYDROUS) (MONO-, HEXA- AND HEPTA HYDRATE)	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		10 <= x % < 25
CAS: 10043-35-3 EC: 233-139-2 REACH: 01-2119486683-25-xxxx BORIC ACID	GHS08 Wng Acute Tox. 5, H303 Repr. 1B, H360 Aquatic Acute 3, H402	[2] [6]	10 <= x % < 25

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

Information on ingredients :

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

[6] Substances of very high concern (SVHC).

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.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

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

In the event of splashes or contact with skin :

Remove any soiled or splashed clothing immediately.

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.

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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, administer activated medical charcoal and consult a doctor.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show 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 (CO₂)

The choice of the method depends on the other products present.

Do not use a strong water jet, danger of spreading of the product.

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)
- ammonia (NH₃)

5.3. Advice for firefighters

Precautions against fire: like in case of all fires involving chemicals, wear appropriate protective equipment (chemical protective clothing, boots and gloves).

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.

If spill is large, evacuate all personnel and only allow intervention by trained operators and equipped with individual protection equipment appropriate (refer to Section 8).

For first aid worker

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

6.2. Environmental precautions

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming) : do not generate dust.

Minimize formation of dust. In case accidental spill, ventilate the area and recover (or vacuuming) the product (preferably) for reuse. Otherwise store into a suitable, properly labelled (waste) container. Disposal via a licensed waste treatment company.

6.4. Reference to other sections

See section 1 for information about emergency contact.

See section 13 for obtain additional information on waste treatment.

See section 8 for information on personal protection equipments.

BUD COMPLEX**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.
Avoid exposure to pregnant women and warn women of child-bearing age of the possible risks

7.1. Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

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 exposure - obtain special instructions before use.

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.
Keep away from food and drink, including those for animals.
Keep away from food, drink and animal feedingstuffs.
Store in a dry place.

Packaging

Always keep in packaging made of an identical material to the original.
Replace the label in case of split of packaging.

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):

PHOSPHATE UREA (CAS: 4861-19-2)

Final use:

Exposure method:
Potential health effects:
DNEL :

Workers.

Inhalation.
Short term local effects.
2.92 mg of substance/m³

Final use:

Exposure method:
Potential health effects:
DNEL :

Consumers.

Inhalation.
Short term local effects.
0.73 mg of substance/m³

Predicted no effect concentration (PNEC):

BORIC ACID (CAS: 10043-35-3)

Environmental compartment:
PNEC :

Soil.
5.4 mg/kg

Environmental compartment:
PNEC :

Fresh water.
2.02 mg/l

Environmental compartment:
PNEC :

Sea water.
2.02 mg/l

Environmental compartment:

Waste water treatment plant.

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PNEC :

10 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.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

Prescription glasses are not considered as protection.

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 :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

These clothes shall be chosen to ensure there is no inflammation or irritation of the skin at the neck and wrist by contact with the powder

Suitable type of protective clothing :

Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Wear suitable protective clothing and, in particular, an apron and boots. These items of clothing shall be maintained in good condition and cleaned after use.

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.

- Respiratory protection

Avoid breathing dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149.

Category :

- FFP2

Exposure controls linked to environmental protection

Do not discharge into drains, surface waters or soil. Recover accidentally quantities of common ground products. Remove waste in accordance with local and national regulations.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****General information :**

Physical state :	Powder or dust.
Color	White
Odor	Odourless
State	Soluble powder (SP)

BUD COMPLEX**Important health, safety and environmental information**

pH (aqueous solution) :	2.44 +/-0.6 (10g/l)
pH :	Not relevant.
Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	1075 (+/-1.5%) g/dm ³
Water solubility :	Partially 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

According to our knowledge, this product does not present any particular hazard under normal conditions of use and storage.

10.4. Conditions to avoid

Avoid :

- formation of dusts

Dusts can form an explosive mixture with air.

10.5. Incompatible materials

Keep away from :

- strong oxidising agents

- strong acids

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- nitrogen oxide (NO)

- ammonia (NH₃)

SECTION 11 : TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

May be harmful if swallowed.

May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure between three minutes and one hour.

Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.

Presumed human reproductive toxicant.

11.1.1. Substances**Acute toxicity :**

BORIC ACID (CAS: 10043-35-3)

Oral route :

LD50 = 4100 mg/kg

Species : Rat

Dermal route :

LD50 > 2000 mg/kg

Species : Rabbit

Inhalation route (Dusts/mist) :

LC50 = 2 mg/l

Species : Rat

ZINC SULPHATE (HYDROUS) (MONO-, HEXA- AND HEPTA HYDRATE) (CAS: 7446-19-7)

Oral route :

LD50 = 574 mg/kg

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Species : Rat

Species : Rat

PHOSPHATE UREA (CAS: 4861-19-2)

Oral route :

LD50 = 2600 mg/kg

Species : Rat

11.1.2. Mixture**Acute toxicity :**

No data on the product itself is available. However according to the representative components, it is possible to provide: Oral LD50 (rat)> 2000mg/kg

Skin corrosion/skin irritation :

may cause skin irritation

Serious damage to eyes/eye irritation :

May cause reversible eye effects such as eye irritation

The severity depends on the concentration and exposure time

Respiratory or skin sensitisation :

No sensitizing effects known.

Germ cell mutagenicity :

No evidence of this effect was found.

Carcinogenicity :

No evidence of this effect was found

Reproductive toxicant :

The repeated and prolonged exposure to dust can cause a risk of impaired fertility and adverse effects during the pregnancy for the child.

SECTION 12 : ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

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

The mineral elements (nutrients) contained in this product are essential for healthy plant growth, but may be harmful in large quantities to wildlife, aquatic organisms or sensitive plants. It is therefore necessary to minimize the amount of product released into the environment, except as part a rational fertilization program for the plants, preferably after a test for soil and/or plant issues.

12.1. Toxicity**12.1.1. Substances**

ZINC SULPHATE (HYDROUS) (MONO-, HEXA- AND HEPTA HYDRATE) (CAS: 7446-19-7)

Fish toxicity :

LC50 = 0.6 mg/l

Factor M = 1

Species : Pimephales promelas

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 0.56 mg/l

Factor M = 1

Species : Daphnia magna

Duration of exposure : 48 h

BORIC ACID (CAS: 10043-35-3)

Fish toxicity :

LC50 = 74 mg/l

Species : Limanda limanda

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 133 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

Algae toxicity :

ECr50 = 24 mg/l

Species : Scenedesmus subspicatus

Duration of exposure : 96 h

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PHOSPHATE UREA (CAS: 4861-19-2)	
Fish toxicity :	LC50 > 9100 mg/l
Crustacean toxicity :	EC50 > 100 mg/l Duration of exposure : 48 h
Algae toxicity :	ECr50 > 100 mg/l

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability**12.2.1. Substances**

BORIC ACID (CAS: 10043-35-3)	
Biodegradability :	no degradability data is available, the substance is considered as not degrading quickly.

ZINC SULPHATE (HYDROUS) (MONO-, HEXA- AND HEPTA HYDRATE) (CAS: 7446-19-7)	
Biodegradability :	no degradability data is available, the substance is considered as not degrading quickly.

PHOSPHATE UREA (CAS: 4861-19-2)	
Biodegradability :	no degradability data is available, the substance is considered as not degrading quickly.

12.2.2. Mixtures

This product is very soluble in water and is dangerous to the aquatic environment in the long term. We must therefore ensure that any flow is not driven into the aquatic environment or in any sewer or drain. When using, avoid spreading of the product in the cultivated areas (hedges, borders, ditches, streams).

12.3. Bioaccumulative potential**12.3.1. Substances**

PHOSPHATE UREA (CAS: 4861-19-2)	
Octanol/water partition coefficient :	log K _{ow} < 1

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.

Local arrangements :

submit to an approved disposal.

BUD COMPLEX**SECTION 14 : TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2017 - IMDG 2016 - ICAO/IATA 2017).

14.1. UN number

1759

14.2. UN proper shipping name

UN1759=CORROSIVE SOLID, N.O.S.

(phosphate urea, zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate))

14.3. Transport hazard class(es)

- Classification :



8

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material :

**14.6. Special precautions for user**

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	8	C10	III	8	80	5 kg	274	E1	3	E

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ
	8	-	III	5 kg	F-A,S-B	223 274	E1

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	8	-	III	860	25 kg	864	100 kg	A3 A803	E1
	8	-	III	Y845	5 kg	-	-	A3 A803	E1

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

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

No data available.

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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.

The information contained in this MSDS was obtained from sources which we believe are reliable and corresponds to the current state of our knowledge and experience of the product and is not exhaustive. This applies to product which conforms to the specifications, unless otherwise stated. In case of formulations or mixtures, make sure that no new dangers can not be produced.

The product should not be used for other purposes than those specified under section 1. Attention of users is drawn to the possible risks incurred when a product is used for purposes other than those for which it was designed, without the prior written handling instructions.

This complements the technical sheets but does not replace plug. Is not exempt under any circumstances, the product user to comply with all laws, regulations and procedures relating to the product, safety, hygiene and protection human health and the environment.

Wording of the phrases mentioned in section 3 :

H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H360	May damage fertility or the unborn child .
H400	Very toxic to aquatic life.
H402	Harmful to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations :

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

CMR: Carcinogenic, mutagenic or reprotoxic.

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.

GHS05 : Corrosion

GHS08 : Health hazard

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.