

**KIWI FRUIT COMPLEX**

**SAFETY DATA SHEET**

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

**1.1. Product identifier**

Product name : KIWI FRUIT COMPLEX

**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 : .

fds-msds@agro-nutrition.fr

Distributed by: DeSangosse New Zealand Ltd, PO Box 113 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.

**SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**GHS compliant.**

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

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



GHS09

Signal Word :

DANGER

Product identifiers :

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

Hazard statements :

H318

Causes serious eye damage.

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.

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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.

P310

Immediately call a POISON CENTER/doctor.

P391

Collect spillage.

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: 6484-52-2 AMMONIUM NITRATE	GHS07, GHS03 Wng Ox. Sol. 3, H272 Acute Tox. 5, H303 Acute Tox. 5, H313 Eye Irrit. 2, H319		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		2.5 <= x % < 10
CAS: 7757-79-1 EC: 231-818-8 NITRATE DE POTASSIUM CRISTALLISE	GHS03 Wng Ox. Sol. 3, H272 Acute Tox. 5, H313		2.5 <= x % < 10
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]	0 <= x % < 2.5

(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.

Reset contact lenses

**In the event of splashes or contact with skin :**

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

Wash with plenty of water and soap. In case of redness or irritation, consult a doctor/medical service.

**In the event of swallowing :**

Seek medical attention, showing the label.

Give nothing by mouth. Do not induce vomiting.

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

Symptoms/lesions after inhalation: cough, respiratory tract irritation.  
Symptoms/lesions after skin contact: skin irritation, redness.  
Symptoms/lesions after eye contact: corrosion, irritation of the eye tissues.  
Symptoms/lesions after ingestion: abdominal pain, nausea.

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

Treat symptomatically.

## 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

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 :

- sulphur dioxide (SO<sub>2</sub>)
- nitrogen dioxide (NO<sub>2</sub>)
- ammonia (NH<sub>3</sub>)

### **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.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures.

### **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.

## 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.

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Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

Avoid formation of dust and dégement when handling.

**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 eye contact with this mixture at all times.

**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, drink and animal feedingstuffs.

Keep the product away from heat sources.

Storage temperature: no restriction.

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.

**Predicted no effect concentration (PNEC):**

BORIC ACID (CAS: 10043-35-3)

Environmental compartment:	Soil.
PNEC :	5.4 mg/kg

Environmental compartment:	Fresh water.
PNEC :	2.02 mg/l

Environmental compartment:	Sea water.
PNEC :	2.02 mg/l

Environmental compartment:	Waste water treatment plant.
PNEC :	10 mg/l

NITRATE DE POTASSIUM CRISTALLISE (CAS: 7757-79-1)

Environmental compartment:	Fresh water.
PNEC :	0.45 mg/l

Environmental compartment:	Sea water.
PNEC :	0.045 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.

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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**

Suitable type of protective clothing :

Wear suitable protective clothing, in particular overalls and boots. These items must be kept in good condition and cleaned after use.

Suitable type of protective boots :

In the event of minor spatter, wear protective boots or half-boots against chemical risks in accordance with standard EN13832-2.

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

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

Physical state :	Powder or dust.
Color	yellow/orange
Odor	slightly ammoniacal
State	Soluble powder (SP)

**Important health, safety and environmental information**

pH (aqueous solution) :	4.80 +/-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 :	1012 (+/-1.5%) g/dm <sup>3</sup>
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.

**KIWI FRUIT COMPLEX****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 :

- formation of dusts
- humidity
- heat

Dusts can form an explosive mixture with air.

**10.5. Incompatible materials**

Keep away from :

- strong oxidising agents
- strong bases
- strong acids

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- sulphur dioxide (SO<sub>2</sub>)
- nitrogen oxide (NO)

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

May have irreversible effects on the eyes, such as tissue damage in the eye, or serious physical decay of sight, which is not fully reversible by the end of observation at 21 days.

Serious eye damage is typified by the destruction of cornea, persistent corneal opacity and iritis.

**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 (n/a) : LC50 = 2 mg/l  
Species : Rat

NITRATE DE POTASSIUM CRISTALLISE (CAS: 7757-79-1)

Oral route : LD50 > 3750 mg/kg  
Species : Rat

Dermal route : LD50 = 5000 mg/kg  
Species : Rat

Inhalation route (n/a) : LC50 = 527 mg/m<sup>3</sup>

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

Oral route : LD50 = 574 mg/kg  
Species : Rat

Species : Rat

AMMONIUM NITRATE (CAS: 6484-52-2)

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Oral route :	LD50 = 2950 mg/kg Species : Rat
Dermal route :	LD50 = 5000 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 :**

Slight erythema observed or no irritant effect.

**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 evidence of this effect has been found.

**Germ cell mutagenicity :**

No evidence of this effect was found.

**Carcinogenicity :**

No evidence of this effect was found

**Reproductive toxicant :**

No evidence of this effect was found.

**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
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Crustacean toxicity :	EC50 = 0.56 mg/l Factor M = 1 Species : Daphnia magna Duration of exposure : 48 h
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BORIC ACID (CAS: 10043-35-3)

Fish toxicity :	LC50 = 74 mg/l Species : Limanda limanda Duration of exposure : 96 h
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Crustacean toxicity :	EC50 = 133 mg/l Species : Daphnia magna Duration of exposure : 48 h
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Algae toxicity :	ECr50 = 24 mg/l Species : Scenedesmus subspicatus Duration of exposure : 96 h
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NITRATE DE POTASSIUM CRISTALLISE (CAS: 7757-79-1)

Fish toxicity :	LC50 = 1378 mg/l
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	Duration of exposure : 96 h
Crustacean toxicity :	EC50 = 490 mg/l Species : Daphnia magna Duration of exposure : 48 h
AMMONIUM NITRATE (CAS: 6484-52-2) Fish toxicity :	LC50 = 447 mg/l Duration of exposure : 48 h
Crustacean toxicity :	EC50 = 490 mg/l Species : Daphnia magna Duration of exposure : 48 h

**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.

NITRATE DE POTASSIUM CRISTALLISE (CAS: 7757-79-1)

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.

AMMONIUM NITRATE (CAS: 6484-52-2)

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**

No data available.

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

No information available. The evaluation was not performed because the product does not meet the requirements applicable to mixtures PBT or vPvB criteria.

**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.



**KIWI FRUIT COMPLEX****Soiled packaging :**

Empty container completely. Keep label(s) on container.  
Give to a certified disposal contractor.

**Local arrangements :**

submit to an approved disposal.

**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**

3077

**14.2. UN proper shipping name**

UN3077=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate))

**14.3. Transport hazard class(es)**

- Classification :



9

**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
	9	M7	III	9	90	5 kg	274 335 375 601	E1	3	-

Not subject to this regulation if Q ≤ 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ
	9	-	III	5 kg	F-A,S-F	274 335 969	E1

Not subject to this regulation if Q ≤ 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	956	400 kg	956	400 kg	A97 A158 A179 A197	E1
	9	-	III	Y956	30 kg G	-	-	A97 A158 A179 A197	E1

Not subject to this regulation if Q ≤ 5 l / 5 kg (IATA 4.4.4 - DS A197)

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.

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**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.

**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 :**

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H313	May be harmful in contact with skin.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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 :**

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

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.