

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

**1.1 Product identifier.**

Product Name: Aminoquelant Mn  
Product Code: F0453, F0865 and other codes that are being added with the same composition.

**1.2 Relevant identified uses of the mixture and uses advised against.**

agricultural use  
professional use

**Uses advised against:**

Uses other than those recommended.

**1.3 Details of the supplier of the safety data sheet.**

Company: **BIOIBERICA S.A.U**  
Address: Polígono Industrial-Ctra. N-II, Km. 680.6 E-08389  
City: Palafolls  
Province: Barcelona  
Telephone: +34 937 650 390  
Fax: +34 934 909 711  
E-mail: reach@bioiberica.com  
Web: www.bioiberica.com

**1.4 Emergency telephone number:** (Available 24 hours)

**SECTION 2: HAZARDS IDENTIFICATION.**

**2.1 Classification of the mixture.**

In accordance with Regulation (EU) No 1272/2008:

Aquatic Chronic 2 : Toxic to aquatic life with long lasting effects.

STOT RE 2 : May cause damage to organs through prolonged or repeated exposure.

**2.2 Label elements.**

**Labelling in accordance with Regulation (EU) No 1272/2008:**

Pictograms:



Signal Word:

**Warning**

H statements:

- |      |  |
|------|--|
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H411 | Toxic to aquatic life with long lasting effects.                   |

P statements:

- |      |   |
|------|---|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray.    |
| P273 | Avoid release to the environment.                   |
| P314 | Get medical advice/attention if you feel unwell.    |
| P391 | Collect spillage.                                   |
| P501 | Dispose of contents/container to ...                |
| P102 | Keep out of reach of children.                      |
| P270 | Do not eat, drink or smoke when using this product. |

Contains:

Manganese(II) sulfate monohydrate

**2.3 Other hazards.**

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.**
**3.1 Substances.**

Not Applicable.

**3.2 Mixtures.**

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	specific concentration limit
CAS No: 10034-96-5	Manganese(II) sulfate monohydrate	25 - 50 %	Aquatic Chronic 2, H411 - STOT RE 2, H373	-

(\*)The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

[1] Substance with a Community workplace exposure limit (see section 8.1).

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**SECTION 4: FIRST AID MEASURES.**

**4.1 Description of first aid measures.**

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

**Inhalation.**

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

**Eye contact.**

Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

**Skin contact.**

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

**Ingestion.**

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

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

Long-term chronic exposure may result in injury to certain organs or tissues.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Keep the person comfortable. Turn him/her over to the left side and stay there while waiting for medical care.

**SECTION 5: FIREFIGHTING MEASURES.**

The product does not present any particular risk in case of fire.

**5.1 Extinguishing media.**

**Suitable extinguishing media:**

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray.

**Unsuitable extinguishing media:**

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

**5.2 Special hazards arising from the mixture.**

**Special risks.**

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

**5.3 Advice for firefighters.**

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Product residues and extinguishing media may contaminate the aquatic environment.

**Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

**SECTION 6: ACCIDENTAL RELEASE MEASURES.**

**6.1 Personal precautions, protective equipment and emergency procedures.**

For exposure control and individual protection measures, see section 8.

**6.2 Environmental precautions.**

Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

**6.3 Methods and material for containment and cleaning up.**

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

**6.4 Reference to other sections.**

For exposure control and individual protection measures, see section 8.  
For later elimination of waste, follow the recommendations under section 13.

**SECTION 7: HANDLING AND STORAGE.**

**7.1 Precautions for safe handling.**

For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

**7.2 Conditions for safe storage, including any incompatibilities.**

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent

the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

**7.3 Specific end use(s).**

- agricultural use
- professional use

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.**

**8.1 Control parameters.**

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.


**8.2 Exposure controls.**

**Measures of a technical nature:**

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>	<b>100 %</b>
<b>Uses:</b>	<b>agricultural use</b> <b>professional use</b>
<b>Breathing protection:</b>	
PPE:	Filter mask for protection against gases and particles.
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.
CEN standards:	EN 136, EN 140, EN 405
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.
Observations:	Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.
Filter Type needed:	A2
<b>Hand protection:</b>	
PPE:	Protective gloves against chemicals.
Characteristics:	«CE» marking, category III.
CEN standards:	EN 374-1, EN 374-2, EN 374-3, EN 420
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.



Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480	Material thickness (mm):	0,35
<b>Eye protection:</b>					
PPE:	Protective goggles with built-in frame.				
Characteristics:	«CE» marking, category II. Eye protector with built-in frame for protection against splashing liquid, dust, smoke, fog and vapour.				
CEN standards:	EN 165, EN 166, EN 167, EN 168				
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.				
Observations:	Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.				
<b>Skin protection:</b>					
PPE:	Protective clothing.				
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.				
CEN standards:	EN 340				
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.				
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.				
PPE:	Work footwear.				
Characteristics:	«CE» marking, category II.				
CEN standards:	EN ISO 13287, EN 20347				
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.				
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident				

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.**

**9.1 Information on basic physical and chemical properties.**

Appearance: Brown liquid

Colour: Brown

Odour: N.A./N.A.

Odour threshold: N.A./N.A.

pH: 4.3-5.3 (100%)

Melting point: N.A./N.A.

Boiling Point: N.A./N.A.

Flash point: N.A./N.A.

Evaporation rate: N.A./N.A.

Inflammability (solid, gas): N.A./N.A.

Lower Explosive Limit: N.A./N.A.  
Upper Explosive Limit: N.A./N.A.  
Vapour pressure: N.A./N.A.  
Vapour density: N.A./N.A.  
Relative density: 1.37 g/cm<sup>3</sup>  
Solubility: soluble  
Liposolubility: N.A./N.A.  
Hydrosolubility: soluble  
Partition coefficient (n-octanol/water): N.A./N.A.  
Auto-ignition temperature: N.A./N.A.  
Decomposition temperature: N.A./N.A.  
Viscosity: N.A./N.A.  
Explosive properties: N.A./N.A.  
Oxidizing properties: N.A./N.A.  
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

**9.2 Other information.**

Pour point: N.A./N.A.  
Blink: N.A./N.A.  
Kinematic viscosity: N.A./N.A.  
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

**SECTION 10: STABILITY AND REACTIVITY.**

**10.1 Reactivity.**

The product does not present hazards by their reactivity.

**10.2 Chemical stability.**

Unstable in contact with:  
- Bases.

**10.3 Possibility of hazardous reactions.**

Neutralization can occur on contact with bases.

**10.4 Conditions to avoid.**

- Avoid contact with bases.

**10.5 Incompatible materials.**

Avoid the following materials:  
- Bases.

**10.6 Hazardous decomposition products.**

Depending on conditions of use, can be generated the following products:  
- Corrosive vapors or gases.

### SECTION 11: TOXICOLOGICAL INFORMATION.

#### 11.1 Information on toxicological effects.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Splatters in the eyes can cause irritation and reversible damage.

#### Toxicological information about the substances present in the composition.

Name	Acute toxicity			
	Type	Test	Kind	Value
Manganese(II) sulfate monohydrate  CAS No: 10034-96-5      EC No:	Oral	LD50	Rat	2150 mg/kg [1] [1] Indian Journal of Pharmacology. Vol. 23, Pg. 153, 1991.
	Dermal			
	Inhalation			

a) acute toxicity;  
 Not conclusive data for classification.

b) skin corrosion/irritation;  
 Not conclusive data for classification.

c) serious eye damage/irritation;  
 Not conclusive data for classification.

d) respiratory or skin sensitisation;  
 Not conclusive data for classification.

e) germ cell mutagenicity;  
 Not conclusive data for classification.

f) carcinogenicity;  
 Not conclusive data for classification.

g) reproductive toxicity;  
 Not conclusive data for classification.

h) STOT-single exposure;  
 Not conclusive data for classification.

i) STOT-repeated exposure;  
 Product classified:



Specific target organ toxicity following a repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure.

j) aspiration hazard;  
Not conclusive data for classification.

## SECTION 12: ECOLOGICAL INFORMATION.

### 12.1 Toxicity.

Name	Ecotoxicity			
	Type	Test	Kind	Value
Manganese(II) sulfate monohydrate  CAS No: 10034-96-5      EC No:	Fish	LC50	Fish	130 mg/l (96 h) [1]  [1] Lewis, M. 1978. Acute Toxicity of Copper, Zinc, and Manganese in Single and Mixed Salt Solutions to Juvenile Longfin Dace, <i>Agosia chrysogaster</i> . J.Fish Biol. 13(6):695-700
	Aquatic invertebrates	LC50	Crustaceans	17,6 mg/l (48 h) [1]  [1] Kimball, G. 1978. The Effects of Lesser Known Metals and One Organic to Fathead Minnows ( <i>Pimephales promelas</i> ) and <i>Daphnia magna</i> . Manuscr., Dep.of Entomol., Fish.and Wildl., Univ.of Minnesota, Minneapolis, MN :88 p.
	Aquatic plants			

### 12.2 Persistence and degradability.

There is no information available on the degradability of the substances present.  
No information is available regarding the degradability of the substances present.No information is available about persistence and degradability of the product.

### 12.3 Bioaccumulative potencial.

No information is available regarding the bioaccumulation of the substances present.

### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

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

No information is available about the results of PBT and vPvB assessment of the product.

**12.6 Other adverse effects.**

No information is available about other adverse effects for the environment.

**SECTION 13 DISPOSAL CONSIDERATIONS.**

**13.1 Waste treatment methods.**

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

**SECTION 14: TRANSPORT INFORMATION.**

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

**14.1 UN number.**

Transportation is not dangerous.

**14.2 UN proper shipping name.**

Description:

ADR: Transportation is not dangerous.

IMDG: Transportation is not dangerous.

ICAO/IATA: Transportation is not dangerous.

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

Transportation is not dangerous.

**14.4 Packing group.**

Transportation is not dangerous.

**14.5 Environmental hazards.**

Transportation is not dangerous.

**14.6 Special precautions for user.**

Transportation is not dangerous.

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

Transportation is not dangerous.

**SECTION 15: REGULATORY INFORMATION.**

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

**15.2 Chemical safety assessment.**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**SECTION 16: OTHER INFORMATION.**

Complete text of the H phrases that appear in section 3:

H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

Classification codes:

Aquatic Chronic 2 : Chronic effect to the aquatic environment, Category 2  
STOT RE 2 : Specific target organ toxicity following a repeated exposure, Category 2

Sections changed compared with the previous version:

1,8,9,16

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

CEN: European Committee for Standardization.  
EC50: Half maximal effective concentration.  
PPE: Personal protection equipment.  
LC50: Lethal concentration, 50%.  
LD50: Lethal dose, 50%.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.