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

1.1 Product identifier: LUQSACAL-N

Other means of identification:

Not relevant

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

Relevant uses (Professional users): Fertilizer
For Professional users only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

LÉRIDA UNIÓN QUÍMICA, S.A. (LUQSA)
Afueras, s/n
25173 Sudanell - Lleida - España
Phone: 973258256
info@luqsa.es
www.luqsa.com

1.4 Emergency telephone number: +34 973 258 256 (Solo disponible en horario de oficina; Lunes-Viernes; 09:00-18:00h; Horario de oficina agosto: Lunes-Viernes; 07:00-15:00h)

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302
Eye Dam. 1: Serious eye damage, Category 1, H318

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:

H302 - Harmful if swallowed.
H318 - Causes serious eye damage.

Precautionary statements:

P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/protective footwear.
P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
P330: Rinse mouth.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Substances that contribute to the classification

Calcium nitrate weight of nitrogen

2.3 Other hazards:

Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

*** Changes with regards to the previous version*

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- CONTINUED ON NEXT PAGE -

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Mixture composed of inorganic substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 10124-37-5 EC: 233-332-1 Index: Not relevant REACH: 01-2119495093-35-XXXX	**Calcium nitrate weight of nitrogen**[1]	Self-classified	**25 - <50%**
	Regulation 1272/2008	Acute Tox. 4: H302; Eye Dam. 1: H318; Ox. Sol. 3: H272 - Danger	
CAS: 124-38-9 EC: 204-696-9 Index: Not relevant REACH: Not relevant	**Carbon dioxide**[2]	Self-classified	**2.5 - <10%**
	Regulation 1272/2008	Press. Gas: H280 - Warning	
CAS: 10034-96-5 EC: 232-089-9 Index: Not relevant REACH: 01-2119456624-35-XXXX	**manganese sulphate · (H2O)**[2]	Self-classified	**<1%**
	Regulation 1272/2008	Aquatic Chronic 2: H411; Eye Dam. 1: H318; STOT RE 2: H373 - Danger	
CAS: 7664-41-7 EC: 231-635-3 Index: 007-001-00-5 REACH: 01-2119488876-14-XXXX	**ammonia, anhydrous**[1]	ATP CLP00	**<1%**
	Regulation 1272/2008	Acute Tox. 3: H331; Aquatic Acute 1: H400; Flam. Gas 2: H221; Press. Gas: H280; Skin Corr. 1B: H314 - Danger	
CAS: 10043-35-3 EC: 233-139-2 Index: 005-007-00-2 REACH: 01-2119486683-25-XXXX	**Boric acid**[1]	ATP ATP17	**<1%**
	Regulation 1272/2008	Repr. 1B: H360FD - Danger	
CAS: 7758-99-8 EC: 231-847-6 Index: 029-023-00-4 REACH: 01-2119520566-40-XXXX	**Copper sulfate pentahydrate**[1]	ATP ATP17	**<1%**
	Regulation 1272/2008	Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318 - Danger	

[1] Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878
[2] Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	M-factor	
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	Acute	10
	Chronic	1

Identification	Specific concentration limit
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	% (w/w) >=100: Press. Gas - H280

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Calcium nitrate weight of nitrogen CAS: 10124-37-5 EC: 233-332-1	LD50 oral	500 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	Not relevant	
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	3 mg/L *	
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	LD50 oral	481 mg/kg	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	Not relevant	

*Equivalent ATE value of the substance applicable to the exposure route of the product. For the ATE value associated with the exposure route of the substance, see section 11.

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EEC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 5 ºC

Maximum Temp.: 30 ºC

Maximum time: 24 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC,Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
Carbon dioxide	IOELV (8h)	5000 ppm	9000 mg/m³
CAS: 124-38-9 EC: 204-696-9	IOELV (STEL)		

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Directive (EU) 2000/39, Directive 2004/37/EC,Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
manganese sulphate · (H2O)	IOELV (8h)		0,05 mg/m³
CAS: 10034-96-5 EC: 232-089-9	IOELV (STEL)		
ammonia, anhydrous	IOELV (8h)	20 ppm	14 mg/m³
CAS: 7664-41-7 EC: 231-635-3	IOELV (STEL)	50 ppm	36 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
manganese sulphate · (H2O)	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 10034-96-5	Dermal	Not relevant	Not relevant	0,004 mg/kg	Not relevant
EC: 232-089-9	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
ammonia, anhydrous	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 7664-41-7	Dermal	6,8 mg/kg	Not relevant	6,8 mg/kg	Not relevant
EC: 231-635-3	Inhalation	47,6 mg/m³	36 mg/m³	47,6 mg/m³	14 mg/m³
Boric acid	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 10043-35-3	Dermal	Not relevant	Not relevant	392 mg/kg	Not relevant
EC: 233-139-2	Inhalation	Not relevant	Not relevant	8,3 mg/m³	Not relevant
Copper sulfate pentahydrate	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 7758-99-8	Dermal	Not relevant	Not relevant	137 mg/kg	Not relevant
EC: 231-847-6	Inhalation	Not relevant	Not relevant	1 mg/m³	1 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Calcium nitrate weight of nitrogen	Oral	10 mg/kg	Not relevant	Not relevant	Not relevant
CAS: 10124-37-5	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
EC: 233-332-1	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
manganese sulphate · (H2O)	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 10034-96-5	Dermal	Not relevant	Not relevant	0,002 mg/kg	Not relevant
EC: 232-089-9	Inhalation	Not relevant	Not relevant	0,043 mg/m³	Not relevant
ammonia, anhydrous	Oral	6,8 mg/kg	Not relevant	6,8 mg/kg	Not relevant
CAS: 7664-41-7	Dermal	68 mg/kg	Not relevant	68 mg/kg	Not relevant
EC: 231-635-3	Inhalation	23,8 mg/m³	7,2 mg/m³	23,8 mg/m³	2,8 mg/m³
Boric acid	Oral	0,98 mg/kg	Not relevant	0,98 mg/kg	Not relevant
CAS: 10043-35-3	Dermal	Not relevant	Not relevant	196 mg/kg	Not relevant
EC: 233-139-2	Inhalation	Not relevant	Not relevant	4,15 mg/m³	Not relevant
Copper sulfate pentahydrate	Oral	0,082 mg/kg	Not relevant	0,041 mg/kg	Not relevant
CAS: 7758-99-8	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
EC: 231-847-6	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant

PNEC:

Identification				
Calcium nitrate weight of nitrogen	STP	18 mg/L	Fresh water	Not relevant
CAS: 10124-37-5	Soil	Not relevant	Marine water	Not relevant
EC: 233-332-1	Intermittent	Not relevant	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
manganese sulphate · (H2O)	STP	56 mg/L	Fresh water	0,03 mg/L
CAS: 10034-96-5	Soil	25,1 mg/kg	Marine water	0 mg/L
EC: 232-089-9	Intermittent	0,088 mg/L	Sediment (Fresh water)	0,011 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,001 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
ammonia, anhydrous	STP	Not relevant	Fresh water	0,001 mg/L
CAS: 7664-41-7	Soil	Not relevant	Marine water	0,001 mg/L
EC: 231-635-3	Intermittent	0,007 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
Boric acid	STP	10 mg/L	Fresh water	2,9 mg/L
CAS: 10043-35-3	Soil	5,7 mg/kg	Marine water	2,9 mg/L
EC: 233-139-2	Intermittent	13,7 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
Copper sulfate pentahydrate	STP	0,23 mg/L	Fresh water	0,0078 mg/L
CAS: 7758-99-8	Soil	65 mg/kg	Marine water	0,0052 mg/L
EC: 231-847-6	Intermittent	Not relevant	Sediment (Fresh water)	87 mg/kg
	Oral	Not relevant	Sediment (Marine water)	676 mg/kg

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks	CE CAT I		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN ISO 21420:2020 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	CE CAT II	EN ISO 16321-1:2022 + EN ISO 16321-3:2022 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing	CE CAT I		Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes	CE CAT II	EN ISO 20347:2022/A1:2024	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2022 y EN 13832-1:2019

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 ºC:	0 kg/m³ (0 g/L)
Average carbon number:	Not relevant
Average molecular weight:	Not relevant

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 ºC:	Liquid
Appearance:	Fluid
Colour:	Greenish
Odour:	Odourless
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	100 ºC
Vapour pressure at 20 ºC:	2350 Pa
Vapour pressure at 50 ºC:	12381,01 Pa (12,38 kPa)
Evaporation rate at 20 ºC:	Not relevant *

Product description:

Density at 20 ºC:	1349 kg/m³
Relative density at 20 ºC:	0,87 - 1,87
Dynamic viscosity at 20 ºC:	2,09 mPa·s
Kinematic viscosity at 20 ºC:	1,55 mm²/s
Kinematic viscosity at 40 ºC:	Not relevant *
Concentration:	Not relevant *
pH:	2 - 3 (at 100 %)
Vapour density at 20 ºC:	Not relevant *
Partition coefficient n-octanol/water 20 ºC:	Not relevant *
Solubility in water at 20 ºC:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

Flammability:

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Flash Point:	Non Flammable (>60 ºC)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	651 ºC
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
Particle characteristics:	
Median equivalent diameter:	Not relevant *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *
Other safety characteristics:	
Surface tension at 20 ºC:	Not relevant *
Refraction index:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Precaution	Precaution	Precaution	Precaution	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Precaution	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: Mixture based on inorganic substances.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
  IARC: Iron trichloride (1: Carcinogenic to humans)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Calcium nitrate weight of nitrogen CAS: 10124-37-5 EC: 233-332-1	LD50 oral	500 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	LD50 oral		
	LD50 dermal		
	LC50 inhalation gases	700 mg/L	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Boric acid CAS: 10043-35-3 EC: 233-139-2	LD50 oral	4080 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	LD50 oral	481 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
Calcium nitrate weight of nitrogen	LC50	1378 mg/L (96 h)	Poecilia reticulata	Fish
CAS: 10124-37-5	EC50	490 mg/L (48 h)	Daphnia magna	Crustacean
EC: 233-332-1	EC50	Not relevant		
manganese sulphate · (H2O)	LC50	>1 - 10 mg/L (96 h)		Fish
CAS: 10034-96-5	EC50	>1 - 10 mg/L (48 h)		Crustacean
EC: 232-089-9	EC50	>1 - 10 mg/L (72 h)		Algae
ammonia, anhydrous	LC50	>0.1 - 1 mg/L (96 h)		Fish
CAS: 7664-41-7	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
EC: 231-635-3	EC50	>0.1 - 1 mg/L (72 h)		Algae
Boric acid	LC50	447 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 10043-35-3	EC50	Not relevant		
EC: 233-139-2	EC50	Not relevant		
Copper sulfate pentahydrate	LC50	0,81 mg/L (96 h)	Cyprinus carpio	Fish
CAS: 7758-99-8	EC50	Not relevant		
EC: 231-847-6	EC50	Not relevant		

Chronic toxicity:

Identification	Concentration		Species	Genus
Calcium nitrate weight of nitrogen	NOEC	157 mg/L	Pimephales promelas	Fish
CAS: 10124-37-5 EC: 233-332-1	NOEC	Not relevant		
Boric acid	NOEC	11,2 mg/L	Pimephales promelas	Fish
CAS: 10043-35-3 EC: 233-139-2	NOEC	25,9 mg/L	Hyalella azteca	Crustacean
Copper sulfate pentahydrate	NOEC	>0.1 - 1 mg/L		Fish
CAS: 7758-99-8 EC: 231-847-6	NOEC	>0.1 - 1 mg/L		Crustacean

12.2 Persistence and degradability:

Not relevant

12.3 Bioaccumulative potential:

Substance-specific information:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
Boric acid	BCF	0
CAS: 10043-35-3	Pow Log	-0.76
EC: 233-139-2	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Carbon dioxide	Koc	Not relevant	Henry	Not relevant
CAS: 124-38-9	Conclusion	Not relevant	Dry soil	Not relevant
EC: 204-696-9	Surface tension	5,7E-4 N/m (25 ºC)	Moist soil	Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
06 10 02*	wastes containing hazardous substances	Hazardous

Type of waste (Regulation (EU) No 1357/2014):

HP6 Acute Toxicity, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

SECTION 15: REGULATORY INFORMATION

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

- Article 95, REGULATION (EU) No 528/2012: *Carbon dioxide (124-38-9) - PT: (NA)* ; *Boric acid (10043-35-3) - PT: (8)* ; *Copper sulfate pentahydrate (7758-99-8) - PT: (2)*
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): *Boric acid (10043-35-3)*
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Not relevant

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SECTION 15: REGULATORY INFORMATION (continued)

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ….):

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors: Contains Calcium nitrate weight of nitrogen. Product under the provisions of Article 9. However, products that contain explosives precursors only to such a small extent and in such complex mixtures that the extraction of the explosives precursors is technically extremely difficult should be excluded from the scope of this Regulation.
Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products.

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Substances that contribute to the classification (SECTION 2):
· New declared substances
Calcium nitrate weight of nitrogen (10124-37-5)
CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):
· Precautionary statements

Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage.
H302: Harmful if swallowed.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 3: H331 - Toxic if inhaled.
Acute Tox. 4: H302 - Harmful if swallowed.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Eye Dam. 1: H318 - Causes serious eye damage.
Flam. Gas 2: H221 - Flammable gas.
Ox. Sol. 3: H272 - May intensify fire, oxidiser.
Press. Gas: H280 - Contains gas under pressure, may explode if heated.
Repr. 1B: H360FD - May damage fertility. May damage the unborn child.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

Classification procedure:

Eye Dam. 1: Calculation method
Acute Tox. 4: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

- CONTINUED ON NEXT PAGE -

SECTION 16: OTHER INFORMATION (continued)

http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

- END OF SAFETY DATA SHEET -