(in accordance with Regulation (EU) No 453/2010)

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

1.1 Product identifier.

CODASUL MICRO Product Name:

Product Code: G0229

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

Agriculture. For professional use only.

Uses advised against:

Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Sustainable Agro Solutions, S.A. Company:

Address: Ctra. N-240, Km.110

City: Almacelles Province: Lleida 973 74 04 00 Telephone: 973 74 14 89 Fax: E-mail: info@sas-agri.com Web: www.sas-agri.com

1.4 Emergency telephone number: 973 74 04 00 (Only available during office 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.

Eye Dam. 1: Causes serious eye damage.

Skin Corr. 1A: Causes severe skin burns and eye damage.

2.2 Label elements.

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

Pictograms:





Signal Word: **Danger**

H statements:

H314 Causes severe skin burns and eye damage. H411 Toxic to aquatic life with long lasting effects.

P statements:

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P310 Immediately call a POISON CENTER/doctor/...

P405 Store locked up.

Dispose of contents/container to ... P501

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

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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:

			(*)Classification No 127	- Regulation (EC) 2/2008
Identifiers	Name	Concentrate	Classification	specific concentration limit
CAS No: 17375-41-6	Ferrous sulphate monohydrate	10 - 25 %	Acute Tox. 4, H302 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315	-
CAS No: 21351-39-3 EC No: 244-343-6 Registration No: 01- 2119782904-26-XXXX	uronium hydrogen sulphate	3 - 10 %	Eye Dam. 1, H318	-
CAS No: 10034-96-5	Manganese(II) sulfate monohydrate	2.5 - 10 %	Acute Tox. 4, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315	-
CAS No: 7758-99-8 EC No: 231-847-6	copper sulphate pentahydrate	0.25 - 2.5 %	Acute Tox. 4 *, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315	-

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

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.

If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

Eye contact.

If wearing contact lenses, remove them. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.

^{*} See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

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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.

Corrosive Product, contact with eyes or skin can cause burns; ingestion or inhalation can cause internal damage, if this occurs immediate medical assistance is required.

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.

SECTION 5: FIREFIGHTING MEASURES.

The product is NOT classified as flammable, in case of fire the following measures should be taken:

5.1 Extinguishing media.

Recommended extinguishing methods.

Extinguisher powder or CO_2 . In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

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.

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 gloves.

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 decontaminator. 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.

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

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III)::

		Qualifying quant the applic	
Code	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS - Hazardous to the Aquatic Environment in Category Chronic 2	200	500

7.3 Specific end use(s).

Agricultural

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. Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Туре	Value
uronium hydrogen sulphate	DNEL	Inhalation, Long-term, Systemic effects	2,697
N. CAS: 21351-39-3	(Workers)		(mg/m³)
N. CE: 244-343-6			

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

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.

Concentration:	100 %				
Uses:	Agriculture. For profe	Agriculture. For professional use only.			
Breathing prote	ction:				
If the recommend	ed technical measures are o	bserved, no individua	I protection equip	ment is necessary.	
Hand protection):				
PPE:	Non-disposable protective	ve gloves against che	micals.		nin
Characteristics:	«CE» marking, category been tested.	«CE» marking, category III. Check the list of chemicals for which the glove has been tested.			
CEN standards:	EN 374-1, En 374-2, EN	EN 374-1, En 374-2, EN 374-3, EN 420			
Maintenance:	A schedule for the periodical replacement of gloves should be established in order to guarantee their replacement before pollutants permeate them. The use of contaminated gloves could be more dangerous than not using gloves, since the pollutant can gradually accumulate in the glove's material.				
Observations:	They are to be replaced reduce their strength.	whenever tears, crac	ks or deformation	s are observed or when	exterior dirt could
Material:	PVI (DOIWING CHIOTIGE) I	Breakthrough time (min.):	> 480	Material thicknes (mm):	s 0,35

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Eye protection:	
PPE:	Protective goggles with built-in frame.
Characteristics:	«CE» marking, category II. Eye protector with built-in frame for protection against 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.
Skin protection:	
PPE:	Chemical protective clothing
Characteristics:	«CE» marking, category III. Clothing should fit properly. The level of protection must be set according to a test parameter called BT (Breakthrough Time), which indicates how long it takes for the chemical to pass through the material.
CEN standards:	EN 464,EN 340, EN 943-1, EN 943-2, EN ISO 6529, EN ISO 6530, EN 13034
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.
Observations:	The protective clothing's design should facilitate correct positioning, staying in place without moving for the period of use expected, bearing in mind environmental factors as well as any movement or position the user might adopt while carrying out the activity.
PPE:	Anti-static safety footwear against chemicals.
Characteristics:	«CE» marking, category III. Check the list of chemicals against which the footwear is resistant.
CEN standards:	EN ISO 13287, EN 13832-1, EN 13832-2, EN 13832-3, EN ISO 20344, EN ISO 20345
	For correct maintenance of this kind of safety footwear, it is necessary to observe the instructions
Maintenance:	specified by the manufacturer. The footwear should be replaced as soon as any sign of damage is
	observed.
Observations:	The footwear should be cleaned regularly and dried when damp, although it should not be placed too close to a source of heat in order to avoid any sharp changes in temperature.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Appearance: Liquid with characteristic odour and colour

Colour: Green Odour:Characteristic Odour threshold: N.A./N.A. pH:1

Melting point: N.A./N.A. Boiling Point: N.A./N.A. Flash point: > 60 °C 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:1,35 g/cm³

Solubility: N.A./N.A. Liposolubility: N.A./N.A. Hydrosolubility: N.A./N.A.

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.

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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.
- Oxidizing agents.

10.3 Possibility of hazardous reactions.

Neutralization can occur on contact with bases.

In certain conditions this may cause a polymerization reaction.

10.4 Conditions to avoid.

Avoid the following conditions:

- Heating.
- High temperature.
- Contact with incompatible materials.
- Avoid contact with bases.

10.5 Incompatible materials.

Avoid the following materials:

- Bases.
- Oxidizing agents.

10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- COx (carbon oxides).
- Organic compounds.
- 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.

Toxicological information about the substances present in the composition.

Nome	Acute toxicity			
Name	Туре	Test	Kind	Value
	Oral	LD50	Rat	2150 mg/kg [1]
Manganese(II) sulfate monohydrate	0.0.	[1] Indian J	lournal of Phar	macology. Vol. 23, Pg. 153, 1991.
wanganese(ii) surate mononyurate	Dermal			
CAS No: 10034-96-5 EC No:	Inhalation			

a) acute toxicity;

Not conclusive data for classification.

Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Oral) = 2907 mg/kg

b) skin corrosion/irritation;

Product classified:

Skin Corrosive, Category 1A: Causes severe skin burns and eye damage.

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c) serious eye damage/irritation;

Product classified:

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Serious eye damage, Category 1: Causes serious eye damage.

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;

Not conclusive data for classification.

j) aspiration hazard;

Not conclusive data for classification.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

Name	Ecotoxicity			
Name	Туре	Test	Kind	Value
	Fish	Manganese	in Single and Mixed	130 mg/l (96 h) [1] sity of Copper, Zinc, and Salt Solutions to Juvenile ster. J.Fish Biol. 13(6):695-
Manganese(II) sulfate monohydrate	Aquatic invertebrates	and One Opromelas)	rganic to Fathead Mi and Daphnia magna.	17,6 mg/l (48 h) [1] is of Lesser Known Metals nnows (Pimephales Manuscr., Dep.of Entomol., ota, Minneapolis, MN :88 p.
CAS No: 10034-96-5 EC No:	Aquatic plants			

12.2 Persistence and degradability.

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.

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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.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA

for air transport.

Land: Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

Sea: Transport by ship: IMDG. Transport documentation: Bill of lading Air: Transport by plane: ICAO/IATA. Transport document: Airway bill.

14.1 UN number. UN No: UN1760

14.2 UN proper shipping name.

Description: UN 1760, CORROSIVE LIQUID, N.O.S., 8, PG III, (E)

14.3 Transport hazard class(es).

Class(es): 8

14.4 Packing group.

Packing group: III

14.5 Environmental hazards.

Marine pollutant: Yes



Dangerous for the environment

14.6 Special precautions for user.

Labels: 8



Hazard number: 80 ADR LQ: 5 L

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR. Transport by ship, FEm - Emergency sheets (F - Fire, S - Spills): F-A,S-B

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Proceed in accordance with point 6.

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

The product is not transported in bulk.

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.

See annex I of the Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): E2

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.

There has been no evaluation a chemical safety assessment of the product.

SECTION 16: OTHER INFORMATION.

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Classification codes:

Acute Tox. 4 [Oral]: Acute toxicity (Oral), Category 4

Aquatic Acute 1: Acute toxicity to the aquatic environment, Category 1 Aquatic Chronic 1: Chronic effect to the aquatic environment, Category 1 Aquatic Chronic 2: Chronic effect to the aquatic environment, Category 2

Eye Dam. 1 : Serious eye damage, Category 1 Eye Irrit. 2 : Eye irritation, Category 2 Skin Corr. 1A: Skin Corrosive, Category 1A Skin Irrit. 2: Skin irritant, Category 2

Sections changed compared with the previous version:

1,10,16

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

Labelling in accordance with Directive 1999/45/EC:

Symbols:

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R Phrases:
R35 Causes severe burns.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrases:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S57 Use appropriate container to avoid environmental contamination.
S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be

considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not

anticipated.

EC50: Half maximal effective concentration.
PPE: Personal protection equipment.
IATA: International Air Transport Association.

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

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

http://echa.europa.eu/

Regulation (EU) No 453/2010. 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) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EC) 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.