

SAFETY DATA SHEET

According to Regulation (EC) N° 1907/2006

Creation 28/10/2019
Update 22/09/2022
Version 4

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

1.1. Product identifier

Product type: Mixture
Commercial name: AGROCEAN LAMINAMnZn - GEOCEANE MnZn
Commercial code(s): VAGMNZN - LAMINAMNZN5F - GEOMNZN5F
UFI n°: WVD0-20UE-X00C-D213

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

Relevant identified uses of the substance or mixture:

Fertilizer

Uses advised against: all other use

1.3. Details of the supplier of the safety data sheet

AGRIMER
Prad Menan - CS 2003
29880 PLOUGUERNEAU - France
Tel : +33 2 98 04 54 11
contact@agrimer.com

1.4. Emergency telephone number

France :

ORFILA number: +33 1 45 42 59 59, gives access to the poison control centers phone numbers.

Other EU countries:

The emergency telephone numbers are available on the European Chemical Agency (ECHA) website in Help section and National helpdesk tab:

<http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>

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SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) N°1272/2008 (CLP):

Serious eye damage/eye irritation (Eye Dam. 1)
Specific target organ toxicity after repeated exposure (STOT RE 2)
Hazardous to the aquatic environment (Aquatic Chronic 2)

2.2. Label elements

Labelling according to Regulation (EC) N°1272/2008 (CLP):

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H318: Causes serious eye damage
H373: May cause damage to organs through prolonged or repeated exposure

H411: Toxic to aquatic life with long lasting effects

Precautionary statements:

P102: Keep out of reach of children.
P260: Do not breathe fume/ gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/eye protection/face protection
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/ophthalmologist.
P314: Get medical advice/ attention if you feel unwell.
P391: Collect spillage.
P401: Storage: Keep away from food, drink and animal feedingstuffs.
P501: Dispose of contents/ container according to regulation.

Substance(s) inducing classification:

Zinc sulphate heptahydrate (CAS 7446-20-0); Manganese sulphate monohydrate (CAS 10034-96-5)

2.3. Other hazards

The product does not contain SVHC >= 0.1% published by ECHA according to REACH regulation, article 57:
<http://echa.europa.eu/fr/candidate-list-table>

The product does not contain substance >= 0,1% meeting the criteria for PBT or vPvB according to REACH regulation (EC) n° 1907/2006, annex XIII.

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The product does not contain substance $\geq 0,1\%$ included in the list established in accordance with REACH regulation (EC) n° 1907/2006, Article 59(1) for having endocrine disrupting properties.

The product does not contain substance $\geq 0,1\%$ identified as having endocrine disrupting properties in accordance with the criteria set out in Delegated Regulation (EU) 2017/2100 setting out scientific criteria for the determination of endocrine-disrupting properties pursuant or Regulation (EU) 2018/605 amending Annex II to Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market and repealing by setting out scientific criteria for the determination of endocrine disrupting properties.

No particular hazards known, if instructions / indications for storage and handling are followed.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Classified substances:

Substance / CAS / n° EC / Index / REACH	%	Substance classification
Zinc sulphate heptahydrate CAS: 7446-20-0 EC n°: 231-793-3 REACH: 01-2119474684-27 INDEX: 030-006-00-9	15-25%	Acute Tox. 4 oral ; H302 Eye Dam. 1 ; H318 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410
Manganese sulphate monohydrate CAS: 10034-96-5 EC n°: 232-089-9 REACH: 01-2119456624-35 INDEX: 025-003-00-4	15-25%	Eye Dam. 1 ; H318 STOT RE 2 ; H373 Aquatic Chronic 2 ; H411 [1]

[1]: substance with workplace exposure limit

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Remove contaminated clothing immediately. First aiders have to pay attention to self-protection. As a general rule, in case of doubt or if symptoms persist, always call a doctor.

Following inhalation:

Remove casualty to fresh air and keep at rest. Seek medical attention in the event of respiratory problems.

Following skin contact:

Wash with water and soap. Seek medical attention in the event of persistent irritation.

Following eye contact:

Rinse immediately with water for at least 15 minutes with the eyelids open. Remove contact lenses. Consult an eye specialist or seek medical attention immediately.

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Following ingestion:

Do not drink. Do not induce vomiting. Rinse mouth with water if the person is conscious and keep at rest. Call a doctor or antipoison center.

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

No data available. Not considered as hazardous in normal conditions of use.

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

Treat symptomatically, no data available on specific treatment.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

All extinguishing media can be used

Unsuitable extinguishing media:

None

5.2. Special hazards arising from the substance or mixture

Combustion releases sulfur oxides, carbon monoxide, carbon dioxide and smoke. Do not inhale smoke.

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus and protective clothing.

Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment to avoid any contact with skin, eyes or personal clothes. See section 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

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6.3. Methods and material for containment and cleaning up

Contain spills with non combustible absorbent materials such as sand, diatomaceous earth in suitable and tightly closed containers for disposal.

6.4. Reference to other sections

See section 8 for information on personal protective equipment and section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not eat, drink or smoke in work area. Wash hands after each use. Strictly follow the directions of use.

7.2. Conditions for safe storage, including any incompatibilities

Keep in the original container tightly closed. Keep at temperature between 5°C and 35°C, away from light and moisture.

7.3. Specific end use(s)

Uses: see point 1.2. and observe instructions for use

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Data on main components:

Workplace Exposure Limits (WEL):

Manganese sulphate monohydrate (CAS 10034-96-5)

UK	Manganese and its inorganic compounds:
EH40/2005 WEL (Fourth Edition 2020)	TWA = 0,05 mg Mn/m ³ (respirable fraction)
	TWA = 0,2 mg Mn/m ³ (inhalable fraction)
EU	Manganese and its inorganic compounds:
Directives 2000/39/EC ; 2006/15/EC ; 2009/161/EU ; (EU) 2017/164 ;	TWA = 0,05 mg Mn/m ³ (respirable fraction)
(EU) 2019/1831	TWA = 0,2 mg Mn/m ³ (inhalable fraction)

Derived No Effect Level (DNEL):

Zinc sulphate heptahydrate (CAS 7446-20-0)

. Worker - long term exposure

Systemic effects (cutaneous contact):	8,3 mg/kg bw/day
Systemic effects (inhalation):	1 mg/m ³

. General population - long term exposure

Systemic effects (cutaneous contact):	8,3 mg/kg bw/day
Systemic effects (inhalation):	1,25 mg/m ³
Systemic effects (oral):	0,83 mg/kg bw/day

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Manganese sulphate monohydrate (CAS 10034-96-5)

. Worker - long term exposure

Systemic effects (cutaneous contact): 0,004 mg/kg bw/day
 Systemic effects (inhalation): 0,2 mg/m³

. General population - long term exposure

Systemic effects (cutaneous contact): 0,002 mg/kg bw/day
 Systemic effects (inhalation): 0,043 mg/m³
 Systemic effects (oral): /

Predicted No Effect Concentration (PNEC):

Zinc sulphate heptahydrate (CAS 7446-20-0)

Fresh water: 20,6 µg/L
 Marine water: 6,1 µg/L
 Fresh water sediment: 117,8 mg/kg
 Marine water sediment: 56,5 mg/kg
 Water intermittent release: /
 Sewage treatment plant: 100 µg/L
 Soil: 35,6 mg/kg

Manganese sulphate monohydrate (CAS 10034-96-5)

Fresh water: 0,0128 mg/L
 Marine water: 0,0004 mg/L
 Fresh water sediment: 0,011 mg/kg
 Marine water sediment: 0,001 mg/kg
 Water intermittent release: 0,03 mg/L
 Sewage treatment plant: 56 mg/L
 Soil: 25,1 mg/kg

8.2. Exposure controls

Appropriate engineering controls

No data

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye glasses with side protection.

Skin and body protection

Wear clean and properly maintained working clothes.

Hand protection

Wear suitable protective gloves in case of prolonged or repeated contact with skin.

Respiratory protection

No individual respiratory protective equipment is necessary.

Hygienic measures

Wash hands after handling product. Do not eat, drink or smoke in the working area.

Environmental exposure controls

Avoid any direct spillage in drainage systems, surface water and drains. Do not allow to enter into soil/subsoil

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state</i>	Liquide
<i>Colour</i>	Green brown
<i>Odour</i>	Characteristic
<i>Melting point/freezing point</i>	Not determined
<i>Initial boiling point and boiling range</i>	Not determined
<i>Flammability</i>	Not flammable
<i>Lower and upper explosion limit</i>	Not determined
<i>Flash point</i>	Not determined
<i>Auto-ignition temperature</i>	Not determined
<i>Decomposition temperature</i>	Not determined
<i>pH</i>	4,0 - 5,5
<i>Kinematic viscosity</i>	Not determined
<i>Solubility</i>	Soluble in water
<i>Partition coefficient n-octanol/water (log value)</i>	Not determined
<i>Vapour pressure</i>	Not determined
<i>Density and/or relative density</i>	1,244 - 1,280
<i>Relative vapour density</i>	Not determined
<i>Particle characteristics</i>	Not applicable

9.2. Other information

No data

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

No data available

10.2. Chemical stability

Product is stable under normal conditions of use and storage

10.3. Possibility of hazardous reactions

Materials to avoid: Strong oxidizing agents

10.4. Conditions to avoid

Heat, moisture and light

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10.5. Incompatible materials

Bases

10.6. Hazardous decomposition products

No data available

SECTION 11. TOXICOLOGICAL INFORMATION

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

No data available on mixture. Data on main components:

Zinc sulphate heptahydrate (CAS 7446-20-0)

ACUTE TOXICITY

Oral:	LD50 = 1570 mg/kg bw (OECD 401)
Dermal:	LD50 > 2000 mg/kg bw (OECD 402)
Inhalation:	/

IRRITATION / CORROSION

Skin:	not irritating
Eye:	highly irritating (OECD 405)

SENSITISATION

Skin:	not sensitising (LLNA)
Respiratory:	not sensitising

CMR

Carcinogenicity:	not classified
Mutagenicity:	no adverse effect observed (OECD 471 ; Micronucleus test)
Toxicity to reproduction:	no adverse effect observed (OECD 416)
Teratogenicity:	no adverse effect observed (hamster)

TARGET ORGANS TOXICITY

Single exposure:	not classified
Repeated exposure:	not classified
ASPIRATION HAZARD	not classified

REPEATED DOSE TOXICITY

Oral:	NOAEL = 13,3 mg Zn/kg bw/day (OECD 408)
Dermal:	/
Inhalation:	/

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Manganese sulphate monohydrate (CAS 10034-96-5)

ACUTE TOXICITY

Oral: LD50 = 2150 mg/kg bw (rat)
 Dermal: /
 Inhalation: LC50 > 4,45 mg/L (OECD 403)

IRRITATION / CORROSION

Skin: not irritating (OECD 404)
 Eye: irritating (OECD 405)

SENSITISATION

Skin: not sensitising (human)
 Respiratory: /

CMR

Carcinogenicity: no adverse effect observed (oral ; mouse)
 Mutagenicity: no adverse effect observed (OECD 476 ; OECD 474)
 Toxicity to reproduction: no adverse effect observed (OECD 416)
 Teratogenicity: no adverse effect observed (OECD 414)

TARGET ORGANS TOXICITY

Single exposure: not classified
 Repeated exposure: presumed risk of serious effects for organs after repeated exposure or long-lasting exposure
 ASPIRATION HAZARD: not classified

ASPIRATION HAZARD

REPEATED DOSE TOXICITY

Oral: NOAEL = 200 mg/kg bw/day (rat)
 Dermal: /
 Inhalation: /

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available on mixture. Data on main components:

Zinc sulphate heptahydrate (CAS 7446-20-0)

FISH

Short-term toxicity: LC50 = 0,3 mg/L (96h ; Pimephales promelas)
 Long-term toxicity: /

AQUATIC INVERTEBRATES

Short-term toxicity: EC50 = 0,1 mg/L (48h ; Daphnia magna)
 Long-term toxicity: /

AQUATIC ALGAE AND CYANOBACTERIA:

MICROORGANISMS: EC10 = 0,1 mg/L

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Manganese sulphate monohydrate (CAS 10034-96-5)

FISH

Short-term toxicity: LC50 = 14,5 mg Mn/L (96h ; OECD 203)

Long-term toxicity: /

AQUATIC INVERTEBRATES

Short-term toxicity: LC50 = 3mg Mn/L (96h ; Hyallela azteca)

Long-term toxicity: /

AQUATIC ALGAE AND CYANOBACTERIA: EC50 = 61 mg/L (72h ; OECD 201)

MICROORGANISMS: EC50 > 1000mg/L (OECD 209)

12.2 Persistence and degradability

Mixture composed of more than 90% of water and inorganic matters. Biodegradability tests are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

The product does not contain substance $\geq 0,1\%$ meeting the criteria for PBT or vPvB according to REACH regulation (EC) n° 1907/2006, annex XIII.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Disposal of this product should be in accordance with local and national legislation. Avoid any direct spillage in drainage systems, surface water and drains. Do not allow to enter into soil/subsoil.

Contaminated packagings

Remaining contents should be emptied and carried out by an authorized waste management company for recycling or disposal

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SECTION 14. TRANSPORT INFORMATION

14.1. UN number

3082

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc sulphate ; manganese sulphate)

14.3 Transport hazard class(es)

ADR / RID:

Class	Code	Group	Label	Ident.	QL	EQ	Cat.	Tunnel
9	M6	III	9	90	5L	E1	3	-

IMDG:

Class	Groupe	QL	EMS	EQ
9	III	5L	F-A, S-F	E1

14.4 Packing group

III

14.5 Environmental hazards

Hazardous for environment according to ADR: YES

Hazardous for environment according to RID: YES

Marine pollutant according to IMDG: YES

14.6 Special precautions for user

No complementary information available

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15. REGULATORY INFORMATION

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

Regulation (EC) n° 1907/2006 (REACH)

Regulation (EC) n° 1272/2008 (CLP)

SVHC substances:

The product does not contain SVHC >= 0.1% published by ECHA according to REACH regulation, article 57:

<http://echa.europa.eu/fr/candidate-list-table>

15.2. Chemical safety assessment

Information not available

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SECTION 16. OTHER INFORMATION

Safety data sheet based on the legal provisions of Regulation (EC) N° 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH), annex II

Hazard statements in section 2 and 3:

H302: Harmful if swallowed

H318: Causes serious eye damage

H373: May cause damage to organs through prolonged or repeated exposure

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects

H411: Toxic to aquatic life with long lasting effects

Abbreviations list:

ADR	Accord for Dangerous goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging of substances and mixtures
CMR	Substances classified as Carcinogenic, Mutagenic, or toxic for Reproduction
DNEL	Derived No Effect Level
EC	European Community
ECHA	European Chemical Agency
EMS	Emergency response procedures
EQ	Excepted Quantities
EU	European Union
IMDG	International Maritime Dangerous Goods code
IMO	International Maritime Organization
PBT	Persistent, Bioaccumulative and Toxic substances
PNEC	Predicted No Effect Concentration
QL	Limited Quantity
REACH	Registration, Evaluation, Authorisation and restriction of Chemicals
RID	Regulation concerning the International carriage of Dangerous goods by Rail (RID)
STEL	Short-Term Exposure Limit
SVHC	Substance of Very High Concern
TWA	Time Weighted Average
UFI	Unique Formula Identifier
UN	the United Nations
vPvB	very Persistent and very Bio-accumulative substances
WEL	Workplace Exposure Limits

This safety data sheet completes the instructions of use but does not replace them. This data is based on the current knowledge relative to the product up to this data. We will not assume any responsibility and will expressly disclaim any liability for any use of the product other than the one for which this product is designed.

The regulatory data given in this safety data sheet is meant to help the user to fulfil regulatory obligations, however.

Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user.

This safety data sheet cannot cover all possible situations that the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary.

All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee training programs for your operation.