

Safety Data Sheet

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Version: 2

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

1.1. Product identifier

Product Name Vitalnova Blade
Product Code: E31090120DB
Pure substance/mixture Mixture.

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

Recommended Use Restricted to professional users. Fertilizer (PC12).
Uses Advised Against: Consumer use [SU 21].

1.3. Details of the supplier of the safety data sheet

Everris International B.V. Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190.

For further information, please contact: INFO-MSDS@EVERRIS.COM.

1.4. Emergency telephone number: IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24h).

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Mixture

Regulation (EC) No 1272/2008 (CLP)

Chronic aquatic toxicity	Category 3 - (H412)
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2.2. Label elements

Hazard Statements:

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements:

P273 - Avoid release to the environment

P501 - Dispose of container in accordance with local regulation

Other hazards (UN-GHS)

Harmful to aquatic life

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No.	CAS No	Weight %	Classification according Regulation (EC) 1272/2008 [CLP]	REACH registration number
Zinc sulfate anhydrous; ZnSO ₄	231-793-3	7733-02-0	0.1 - 1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27
Manganese sulphate; MnSO ₄ +1H ₂ O	232-08-99	7785-87-7	0.1 - 1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Copper sulphate anhydrous; CuSO ₄	231-847-6	7758-98-7	< 0.1%	Eye Dam. 1 (H318) Acute Tox. 4 (H302)	01-2119520566-40

				Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	
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Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice:	First aid measures should be executed by trained personnel only.
Inhalation	In the case of inhalation of aerosol/mist consult a physician if necessary. Move to fresh air in case of accidental inhalation of vapours. If breathing is difficult, give oxygen.
Skin Contact:	If skin irritation persists, call a physician.
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

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

May cause eye/skin irritation
Prolonged contact may cause redness and irritation

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

None under normal processing.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media: Coordinate fire extinguishing measures to fire in surrounding area. Use dry chemical, CO₂, water spray or "alcohol" foam.

Unsuitable Extinguishing Media: High volume water jet.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Wear protective clothes and suitable gloves.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and leeward of spill/leak.
For Emergency Responders: Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not allow product to enter soil, ground water, natural waterways or sewers. If product enters soil, ground water, natural waterways or drains, inform the local authorities.

6.3. Methods and material for containment and cleaning up

Methods for Containment: Prevent further leakage or spillage if safe to do so.
Methods for Cleanup: Bind with soil, sand, absorptive material.

6.4. Reference to other sections

§ 8, 12, 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/storage conditions:

Keep containers tightly closed in a cool, well-ventilated place. Keep in a cool, well-ventilated place. Store in original container. Store in original container.

Packaging Materials:

LGK (Germany)

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7.3. Specific end use(s)

Specific use(s)

Exposure scenario

Fertilizer; www.everris.com; Read and follow label instructions Mixture. Not required.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<i>Manganese sulphate; MnSO₄+1H₂O</i>	
Austria	STEL 2 mg/m ³ TWA: 0.5 mg/m ³
Australia	0.2 mg/m ³
Belgium - 8 Hr TWA	0.2 mg/m ³
Denmark	TWA: 0.2 mg/m ³
Finland	TWA: 0.02 mg/m ³ TWA: 0.2 mg/m ³
Ireland	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³
Japan	0.2 mg/m ³ OEL Mn
NL MAC - TWA:	STEL: 0.05 mg/m ³ TWA: 0.2 mg/m ³
Norway	TWA: 0.1 mg/m ³ STEL: 0.1 ppm
Poland	TWA: 0.05 mg/m ³
Portugal	TWA: 0.2 mg/m ³
Spain - Valores Limite Ambientales - VLE	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Switzerland	TWA: 0.5 mg/m ³
UK EH40 WEL (8h)	5 mg/m ³
<i>Copper sulphate anhydrous; CuSO₄</i>	
Austria	STEL 4 mg/m ³ TWA: 1 mg/m ³
Australia	N.A.
Finland	TWA: 0.02 mg/m ³
Poland	TWA: 0.2 mg/m ³
Russia TWA	0.5 mg/m ³ TWA 1258
Switzerland	STEL: 0.2 mg/m ³ TWA: 0.1 mg/m ³

Derived No Effect Level (DNEL)

Component	Oral	Dermal	Inhalation
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (0.1 - 1%)	37.6 mg/m ³	0.004 mg/kg bw/day	0.2 mg/m ³

Predicted No Effect Concentration (PNEC)

No data available

Component	Fresh Water	Freshwater sediment	Sea Water	Sea sediment	Soil	Impact on Sewage Treatment
Manganese sulphate;	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg

MnSO ₄ +1H ₂ O 7785-87-7 (0.1 - 1%)						
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (< 0.1%)	7.8 µg/l	87 mg/kg	5.2 µg/l	676 mg/kg	65 mg/kg	230 µg/l

8.2. Exposure controls

Personal protective equipment

Eye/Face Protection

Wear eye/face protection

Hand protection

Gloves. Nitrile rubber (0.26 mm). Break through time. > 8 h.

Respiratory Protection

Not required; except in case of aerosol formation. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit

Skin and body protection:

Lightweight protective clothing

Hygiene Measures:

When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State:

Liquid

Color:

brown.

Odor:

Not significant

Melting Point/Freezing Point:

No data available

Boiling Point/Range:

> 35 °C .

Flash Point:

no data available.

Evaporation Rate:

no data available.

Flammability (solid, gas):

Not flammable

Vapor Pressure:

no data available.

Vapour density

no data available.

Relative density

No data available

Water Solubility:

No data available miscible

Solubility(ies)

miscible No data available

Partition Coefficient:

no data available.

Autoignition Temperature:

No data available

Decomposition temperature:

No data available

Explosive Properties:

Doesn't present explosion hazard.

9.2. Other information

VOC Content (%):

Solid. Not applicable.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

10.4. Conditions to avoid

For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used packaging should be closed well.

10.5. Incompatible materials

Keep away from catalysts like derivatives of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

10.6. Hazardous decomposition products

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):

Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Eye contact	May cause slight irritation.
Skin Contact	May cause irritation.
Ingestion	May cause gastrointestinal discomfort if consumed in large amounts.

Information on Toxicological Effects

None known

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): 8,535.00 mg/kg

Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc sulfate anhydrous; ZnSO ₄	= 1710 mg/kg (Rat)		
Manganese sulphate; MnSO ₄ +1H ₂ O	= 2125 mg/kg (Rat)		> 4.98 mg/L (Rat) 4h
Copper sulphate anhydrous; CuSO ₄	= 300 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

Serious eye damage/eye irritation	Classification based on individual ingredients of the mixture.
Respiratory or skin sensitization	Classification based on individual ingredients of the mixture.
Germ Cell Mutagenicity	Classification based on individual ingredients of the mixture.
Carcinogenicity	Classification based on individual ingredients of the mixture.
Reproductive Toxicity	Classification based on individual ingredients of the mixture.
STOT - Single Exposure	Classification based on individual ingredients of the mixture.
STOT - Repeated Exposure	Classification based on individual ingredients of the mixture.
Aspiration Hazard	Classification based on individual ingredients of the mixture.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Should not be released into the environment

Unknown Aquatic Toxicity

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea

Zinc sulfate anhydrous; ZnSO ₄	64.8: 72 h Chlorella vulgaris mg/L EC50 2.4: 96 h Chlorella vulgaris mg/L EC50 0.056: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	0.162: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.03 - 0.05: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.218 - 0.42: 96 h Pimephales promelas mg/L LC50 flow-through 0.34 - 0.93: 96 h Oncorhynchus mykiss mg/L LC50 static 0.06: 96 h Pimephales promelas mg/L LC50 static 0.48 - 1.72: 96 h Poecilia reticulata mg/L LC50 static 49.23 - 64.16: 96 h Poecilia reticulata mg/L LC50 semi-static 3.55 - 6.32: 96 h Lepomis macrochirus mg/L LC50 static 0.168 - 0.25: 96 h Pimephales promelas mg/L LC50 semi-static 0.15: 96 h Cyprinus carpio mg/L LC50 semi-static 16.85 - 27.18: 96 h Cyprinus carpio mg/L LC50 static 3 - 4.6: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.63: 96 h Poecilia reticulata mg/L LC50 0.23 - 0.48: 96 h Pimephales promelas mg/L LC50	-	0.538 - 0.908: 48 h Daphnia magna mg/L EC50 Static 0.75: 48 h Daphnia magna mg/L EC50
Copper sulphate anhydrous; CuSO ₄	-	0.1: 96 h Oncorhynchus mykiss mg/L LC50	-	0.024: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability**Persistence and Degradability:**

No persistent or cumulative effects were observed.

12.3. Bioaccumulative potential**Bioaccumulation:**

Does not bioaccumulate.

12.4. Mobility in soil

No data available.

12.5. PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

Section 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods****Disposal of Wastes:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging:

Do not reuse container.

Other Information

Use up product completely. Packaging material is industrial waste.

Section 14: TRANSPORT INFORMATION

IMO / IMDG

14.1 UN-No:	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class:	Not regulated
14.4 Packing group:	Not regulated

Chemical Name	IMDG - Marine Pollutants
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (< 0.1%)	IMDG regulated marine pollutant (Listed in the index, listed under Copper sulphate, anhydrous, hydrates and solution)

Marine Pollutant: No information available

14.6 Special Provisions	None
14.7 Bulk transport according Annex II of MARPOL and IBC Code	No data available

ADR/RID

14.1 UN-No:	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class:	Not regulated
14.4 Packing group:	Not regulated
14.5 Environmental Hazard	Not regulated
14.6 Special Provisions	None

IATA

14.1 UN-No:	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class:	Not regulated
14.4 Packing group:	Not regulated
14.5 Environmental Hazard	Not regulated
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Belgium****Denmark**

Denmark No data available

France

ICPE Not regulated

Germany

LGK (Germany)

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Water Endangering Class (WGK):

2 (Everris classification)

Gefahrstoffverordnung (Germany) TRGS 511

Not regulated

Component	German WGK Section
Zinc sulfate anhydrous; ZnSO ₄ 7733-02-0 (0.1 - 1%)	class 3
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (0.1 - 1%)	2
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (< 0.1%)	2

15.2 Chemical safety assessment

Substance(s) usage is covered according to Reach regulation 1907/2006

Take note of Dir. 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work

Section 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

- H302 - Harmful if swallowed
- H318 - Causes serious eye damage
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H373 - May cause damage to the kidneys/ liver/ eyes/ brain/ respiratory system/ central nervous system through prolonged or repeated exposure in contact with skin
- H411 - Toxic to aquatic life with long lasting effects

Key or legend to abbreviations and acronyms used in the safety data sheet

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

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No Effect Concentration

DNEL: Derived No-Effect Level

REACH: Registration, Evaluation, Authorization of Chemicals

CLP: EU-GHS; Classification, Labelling and Packaging

OEL: Occupational Exposure Limit

TWA: Time Weighted Average

ATE: Acute Toxicity Estimate

EUH phrase: CLP (EU) specific hazard statement

LD50: Lethal dose, 50%.

LC50: Lethal concentration, 50%.

SVHC: Substance of Very High Concern.

Classification procedure

- Calculation method
- Expert judgment and weight of evidence determination

Key literature references and sources for data

According to EC Regulation 1907/2006 (Reach), Regulation EU No. 2015/830. Regulation (EC) No 1272/2008 (CLP).

Prepared by

Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)

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Restrictions on use

Restricted to professional users

Reason for revision

*** Indicates changes since the last revision. This version replaces all previous versions

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