

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: 31200120DB

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

Recommended Use: Restricted to professional users
Fertilizer

Uses Advised Against: Consumer use.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Everris International BV
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

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

Product Identifier:

Signal Word:

None

Hazard Statements:

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

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

Ingredients	EC-No.	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Urea	200-315-5	57-13-6	5 - 10%	Not classified	01-2119463277-33
Zinc Sulfate anh; ZnSO4	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)	no data available
Manganese sulphate; MnSO4+1H2O	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 anh; CuSO4	231-847-6	7758-98-7	< 0.1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119520566-40

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:** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
- 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.
- Protection of First-Aiders:** Low hazard for usual industrial or commercial handling.

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

- Symptoms:** May cause eye/skin irritation
Prolonged contact may cause redness and irritation

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

- Notes to Physician:** 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.
 13
 LGK (Germany) Store in original container.
 Packaging Materials:

7.3. Specific end use(s)

Specific use(s) Fertilizer; Read and follow label instructions; www.everris.com

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<u>Urea</u>	
Bulgaria - Occupational Exposure Limits - TWAs	10.0 mg/m ³ TWA
Latvia - Occupational Exposure Limits - TWAs	10 mg/m ³ TWA
Norway	TWA: 30 µg Hg/g Creatinine STEL: 45 µg Hg/g Creatinine
<u>Zinc Sulfate anh; ZnSO4</u>	
German mak	TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³
<u>Manganese sulphate; MnSO4+1H2O</u>	
Austria	STEL 2 mg/m ³ TWA: 0.5 mg/m ³
Belgium - 8 Hr TWA	0.2 mg/m ³
Denmark	TWA: 0.2 mg/m ³
Finland	TWA: 0.2 mg/m ³ TWA: 0.1 mg/m ³

German mak	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³ Ceiling / Peak: 1.6 mg/m ³ Ceiling / Peak: 0.16 mg/m ³ TWA: 0.5 mg/m ³
Ireland	TWA: 0.2 mg/m ³
Netherlands - OEL - MACs:	1 mg/m ³
Norway	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ STEL: 3 ppm STEL: 0.3 mg/m ³
Poland	TWA: 0.3 mg/m ³
Portugal	TWA: 0.2 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 0.2 mg/m ³
Sweden - OEL - 8 Hour	0.2 mg/m ³ LLV (totalt)
Switzerland	TWA: 0.5 mg/m ³
UK oes/mel:	TWA: 0.5 mg/m ³
<i>Copper sulphate anh; CuSO4</i>	
Austria	STEL 4 mg/m ³ STEL 0.4 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³
Finland	TWA: 1 mg/m ³
German mak	TWA: 0.1 mg/m ³ Ceiling / Peak: 0.2 mg/m ³
Netherlands - OEL - MACs:	0.1 mg/kg TWA
Poland	TWA: 0.2 mg/m ³
Russia TWA	0.5 mg/m ³ TWA Cu
Switzerland	STEL: 0.2 mg/m ³ TWA: 0.1 mg/m ³

Derived No Effect Level (DNEL)

No data available

Predicted No Effect Concentration (PNEC)

No data available.

8.2. Exposure controls

Engineering Measures to Reduce Exposure: Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection: Tightly fitting safety goggles
 Hand protection: Nitrile rubber (0.26 mm). Break through time. > 8 h.
 Respiratory Protection: In case of insufficient ventilation wear suitable respiratory equipment.
 Skin and Body Protection: Lightweight protective clothing
 Hygiene Measures: Follow good housekeeping practices. When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State:	liquid
Color:	brown.
Odor:	Not significant
pH:	no data available
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):	Non-flammable

Vapor Pressure:	no data available
Vapor Density:	no data available
Specific Gravity:	no data available
Water Solubility:	miscible
Solubility(ies)	miscible no data available
Partition Coefficient:	no data available
Autoignition Temperature:	not applicable
Decomposition Temperature:	no data available
Explosive Properties:	Doesn't present explosion hazard. Based on data of ingredients.

9.2. Other information

Bulk density:	no data available
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Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions**Hazardous Decomposition Products:**

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

Possibility of Hazardous Reactions:

None under normal processing.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Acute Toxicity****Product Information:**

Inhalation:	May cause irritation of respiratory tract.
Eye Contact:	May cause irritation.
Skin Contact:	May cause irritation.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Unknown Acute Toxicity:	0% of the mixture consists of ingredient(s) of unknown toxicity.
The following values are calculated based on chapter 3.1 of the GHS document:	
ATEmix (oral):	8,535.00 mg/kg

Component Information:

Ingredients	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc Sulfate anh; ZnSO4	= 500 mg/kg (Rat)		
Manganese sulphate; MnSO4+1H2O	= 782 mg/kg (Rat)		
Copper sulphate anh; CuSO4	= 300 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	

Skin Corrosion or Irritation

See also section 3.

Serious Eye Damage or Eye Irritation

See also section 3.

Sensitization

See also section 3.

Mutagenic effects

See also section 3.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive Toxicity**Teratogenicity**

No data available.

STOT - Single Exposure

No known effects under normal use conditions.

STOT - Repeated Exposure

None under normal use conditions.

Aspiration Hazard

No data available.

Section 12: ECOLOGICAL INFORMATION
12.1. Toxicity

Harmful to aquatic life with long lasting effects. Do not allow product to enter the environment uncontrolled.

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

Ingredients	Algae/aquatic plants	Fish	Crustacea
Urea		16200 - 18300: 96 h <i>Poecilia reticulata</i> mg/L LC50	3910: 48 h <i>Daphnia magna</i> mg/L EC50 Static
Zinc Sulfate anh; ZnSO4	0.056: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static	0.162: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.03 - 0.05: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 0.34 - 0.93: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 0.218 - 0.42: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.168 - 0.25: 96 h <i>Pimephales promelas</i> mg/L LC50 semi-static 0.15: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 3 - 4.6: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 16.85 - 27.18: 96 h <i>Cyprinus carpio</i> mg/L LC50 static 49.23 - 64.16: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 0.48 - 1.72: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 0.63: 96 h <i>Poecilia reticulata</i> mg/L LC50 3.55 - 6.32: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.06: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.23 - 0.48: 96 h <i>Pimephales promelas</i> mg/L LC50	0.538 - 0.908: 48 h <i>Daphnia magna</i> mg/L EC50 Static 0.75: 48 h <i>Daphnia magna</i> mg/L EC50
Copper sulphate anh; CuSO4		0.1: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50	0.024: 48 h <i>Daphnia magna</i> mg/L EC50

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

Ingredients	LOGPOW
Urea	-1.59

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

not applicable

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 re-use empty containers. Dispose of as unused product.

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

14.5

Component

IMDG - Marine Pollutants

Copper sulphate anh; CuSO₄
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

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

Not regulated

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

National regulations

France

ICPE (FR): Not regulated

Belgium

Germany

Gefahrstoffverordnung (Germany) TRGS 511 Not regulated

LGK (Germany)

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Water Endangering Class (WGK):

2 (Everris classification)

Component	German WGK Section
Urea 57-13-6 (5 - 10%)	class 1
Zinc Sulfate anh; ZnSO4 7733-02-0 (0.1 - 1%)	class 3
Manganese sulphate; MnSO4+1H2O 7785-87-7 (0.1 - 1%)	class 1
Copper sulphate anh; CuSO4 7758-98-7 (< 0.1%)	class 2

European Union

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

15.2. Chemical safety assessment

Not required. Substance(s) usage is covered according to Reach regulation 1907/2006.

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 statement: CLP (EU) specific hazard statement.

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. 453/2010
Regulation (EC) No 1272/2008

Prepared by:

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

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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End of Safety Data Sheet