Issue Date: 30-Dec-2013

Revision Date: 03-Mar-2015

Safety Data Sheet

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

1.1. Product identifier Product Name: Product Code Synonyms:

Sierrablen Plus 15-0-28+2MgO 41940125DA Sierrablen Plus 15-0-23.2+1.2Mg

Category 1 - (H318)

1.2. Relevant identified uses of the substance or mixture and uses advised againstRecommended Use:Fertilizer. Restricted to professional users.Uses Advised Against:Consumer use [SU 21].

<u>1.3. Details of the supplier of the safety data sheet</u>
 <u>Manufacturer</u>
 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

Serious Eye Damage or Eye Irritation

2.2. Label elements

Contains Potassium sulphate; K2SO4



Signal Word: Danger

Hazard Statements: H318 - Causes serious eye damage

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

P280 - Wear 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 or doctor/physician

Other hazards (UN-GHS)

H316 - Causes mild skin irritation

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
Potassium sulphate; K ₂ SO ₄	231-915-5	7778-80-5	40 - 65%	Eye Dam. 1 (H318)	01-2119489441-34
Urea	200-315-5	57-13-6	25 - 40%	Not classified	01-2119463277-33
Sulphur; S	231-722-6	7704-34-9	1 - 5%	Skin Irrit. 2 (H315)	01-2119487295-27
Magnesium oxide; MgO	215-171-9	1309-48-4	1 - 5%	Not classified	Exempt
Calcium sulphate dihydrate; CaSO4+2H2O	231-900-3	10101-41-4	1 - 5%	Not classified	01-2119444918-26
Calcium Carbonate; CaCO ₃	207-439-9	471-34-1	1 - 5%	Not classified	Exempt
Iron sulphate; FeSO ₄ +1H ₂ O	231-753-5	7720-78-7	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119513203-57
Manganese sulphate; MnSO4+1H2O	232-08-99	7785-87-7	< 0.1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35

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 case of shortness of breath, give oxygen. Possible symptoms are coughing and/or dyspnoea. Move to fresh air. If symptoms persist, call a physician.		
Skin Contact:	If a person feels unwell or symptoms of skin irritation appear, consult a physician.		
Eye Contact:	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.		
Ingestion:	Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. In case of respiratory difficulties practice oxygenotherapy. Possible symptoms are nausea and/or vommiting.		
Protection of First-Aiders:	Low hazard for usual industrial or commercial handling.		
4.2. Most important symptoms and effects, both acute and delayed			
Symptoms:	None under normal processing		
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

Coordinate fire extinguishing measures to fire in surrounding area.

Hazchem code: None

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions:Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment.For Emergency Responders:Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent product from entering drains. Do not contaminate surface water.

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:	Shovel or sweep up. Do not create a powder cloud by using a brush or compressed air.
	Prevent product from entering drains.

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:

LGK (Germany) Packaging Materials: When using, do not eat, drink or smoke.

Keep away from heat and sources of ignition. Keep away from food, drink and animal feeding stuffs. For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well. Keep at temperatures between 0 °C and 40 °C. 13 Bags or Bulk.

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

Potassium sulphate; K ₂ SO ₄	
Bulgaria - Occupational Exposure Limits - TWAs	10.0 mg/m³ TWA
Latvia - Occupational Exposure Limits - TWAs	10 mg/m³ TWA
Urea	
Bulgaria - Occupational Exposure Limits - TWAs	10.0 mg/m³ TWA
Latvia - Occupational Exposure Limits - TWAs	10 mg/m³ TWA
Norway	TWA: 30 µg Hg/g Creatinine
	STEL: 30 µg Hg/g Creatinine
Sulphur; S	
Latvia - Occupational Exposure Limits - TWAs	6 mg/m³ TWA

Russia TWA	6 mg/m3 TW/A 1700
Russia Twa Magnesium oxide; MgO	6 mg/m³ TWA 1790
Austria	STEL 20 mg/m ³
	STEL 10 mg/m ³
	TWA: 5 mg/m ³
	TWA: 10 mg/m ³
Australia TWA	10 mg/m ³ TWA fume
Belgium - 8 Hr TWA	10 mg/m ³
Bulgaria - Occupational Exposure Limits - TWAs	10.0 mg/m³ TWA
Czech Republic OEL	5 mg/m³ TWA
Denmark	TWA: 6 mg/m ³
France - Occupational Exposure Limits - 8 Hour VMEs	TWA: 10 mg/m ³
Hungary - Occupational Exposure Limits - TWAs	6 mg/m³ TWA
Iceland - OEL - 8 Hour	6 mg/m³ TWA Mg
Ireland	TWA: 4 mg/m ³
	TWA: 5 mg/m ³
	TWA: 10 mg/m ³ STEL: 10 mg/m ³
	STEL: 10 mg/m ³
	STEL: 30 mg/m ³
Korea - ISHA - Occupational Exposure Limits - TWAs	10 mg/m ³ TWA (Serial No. 272)
Malaysia - Occupational Exposure Limits - TWAs	10 mg/m ³ TWA (fume)
Norway	TWA: 10 mg/m ³
	STEL: 20 mg/m ³
Poland	TWA: 10 mg/m ³
Portugal	TWA: 10 mg/m ³
Romania - Occupational Exposure Limits - TWAs	5 mg/m ³ TWA (fume)
Spain OEL - Time Weighted Average (TWA):	TWA: 10 mg/m ³
Singapore - OEL:PELs	10 mg/m ³ PEL
Switzerland	TWA: 3 mg/m ³
UK oes/mel:	STEL: 30 mg/m ³
	STEL: 12 mg/m ³
	TWA: 10 mg/m ³
	TWA: 4 mg/m ³
Calcium sulphate dihydrate; CaSO4+2H2O	
Belgium - 8 Hr TWA	10 mg/m³ TWA
Portugal	TWA: 10 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 10 mg/m ³
Switzerland	TWA: 3 mg/m ³
Calcium Carbonate; CaCO ₃	10 mg/m ³ TIMA inholohig duct
Australia TWA Bulgaria - Occupational Exposure Limits - TWAs	10 mg/m³ TWA inhalable dust 10.0 mg/m³ TWA
Czech Republic OEL	10.0 mg/m³ TWA
France - Occupational Exposure Limits - 8 Hour VMEs	TWA: 10 mg/m ³
Latvia - Occupational Exposure Limits - TWAs	6 mg/m ³ TWA
Poland	TWA: 10 mg/m ³
Portugal	TWA: 10 mg/m ³
Switzerland	TWA: 10 mg/m ³
Iron sulphate; FeSO4+1H2O	i wiki o nigini
Belgium - 8 Hr TWA	1 mg/m ³
Denmark	TWA: 1 mg/m ³
Finland	TWA: 1 mg/m ³
Ireland	TWA: 1 mg/m ³
	STEL: 2 mg/m ³
Norway	TWA: 1 mg/m ³
	STEL: 1 mg/m ³
Portugal	TWA: 1 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 1 mg/m ³
Switzerland	TWA: 1 mg/m ³
UK oes/mel:	TWA: 1 mg/m ³
Manganese sulphate; MnSO4+1H2O	
Austria	STEL 2 mg/m ³
	TWA: 0.5 mg/m ³
Australia TWA	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
Norway	TWA: 1 mg/m ³
	TWA: 0.1 mg/m ³
	STEL: 1 ppm
	STEL: 0.1 mg/m ³
Poland	TWA: 0.2 mg/m ³
	TWA: 0.05 mg/m ³
Portugal	TWA: 0.2 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 0.2 mg/m ³
Switzerland	TWA: 0.5 mg/m ³
UK oes/mel:	TWA: 0.5 mg/m ³

Predicted No Effect Concentration No information available. **(PNEC)**

8.2. Exposure controls

Personal protective equipment

Eye/face Protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. 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:	Solid
Appearance:	Granules
Color:	orange, light grey.
Odor:	Not significant
Bulk density:	800 - 1100 kg/m³
pH:	no data available
Melting Point/Freezing Point:	no data available
Boiling Point/Range:	Solid, Not Applicable
Flash Point:	Solid, Not Applicable
Evaporation Rate:	Solid, Not Applicable
Flammability (solid, gas):	Non-flammable
Vapor Pressure:	Solid, Not Applicable
Vapor Density:	Solid, Not Applicable
Specific Gravity:	no data available
Water Solubility:	Soluble in water
Solubility(ies)	no data available
Partition Coefficient:	Solid, Not Applicable
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 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

Possibility of hazardous reactions None under normal processing.

Hazardous Decomposition Products:

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 bags should be closed well.

10.5. Incompatible materials

None known based on information supplied.

10.6. Hazardous decomposition products

None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

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

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.
Information on Toxicological Effects:	
Symptoms	No information available.
Acute Toxicity	
The following values are calculated	based on chapter 3.1 of the GHS document:

ATEmix (oral): 13,566.00 mg/kg

Unknown Acute Toxicity: 5% of the mixture consists of ingredient(s) of unknown toxicity.

Ingredients	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium sulphate; K ₂ SO ₄	= 6600 mg/kg (Rat)	> 2000 mg/kg (Rat)	
Urea	= 8471 mg/kg (Rat)		
Sulphur; S	> 3000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 9.23 mg/L (Rat)4 h
Calcium Carbonate; CaCO ₃	= 6450 mg/kg (Rat)		
Iron sulphate; FeSO ₄ +1H ₂ O	= 500 mg/kg (Rat)		
Manganese sulphate;	= 782 mg/kg (Rat)		
MnSO ₄ +1H ₂ O			

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

skin corrosion/irritation No information available.

No information available. Serious eye damage/eye irritation

Respiratory or skin sensitization	No information available.
Germ Cell Mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive Toxicity	No information available.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Aspiration Hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Do not allow product to enter the environment uncontrolled.

Unknown Aquatic Toxicity:

12% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Ingredients	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Potassium sulphate;	2900: 72 h	653: 96 h Lepomis	-	890: 48 h Daphnia
K2SO4	Desmodesmus	macrochirus mg/L LC50		magna mg/L EC50
	subspicatus mg/L EC50	3550: 96 h Lepomis		
		macrochirus mg/L LC50		
		static 510 - 880: 96 h		
		Pimephales promelas		
		mg/L LC50 static		
Urea	> 10000: 192 h	16200 - 18300: 96 h	-	3910: 48 h Daphnia
	Scenedesmus	Poecilia reticulata mg/L		magna mg/L EC50 Static
	quadricauda mg/L EC50	LC50		10000: 24 h Daphnia
				magna Straus mg/L
				EC50
Sulphur; S	-	866: 96 h Brachydanio	-	-
		rerio mg/L LC50 static		
		14: 96 h Lepomis		
		macrochirus mg/L LC50		
		static 180: 96 h		
		Oncorhynchus mykiss		
		mg/L LC50 static		
Iron sulphate;	-	925: 96 h Poecilia	-	152: 48 h Daphnia
FeSO ₄ +1H ₂ O		reticulata mg/L LC50		magna mg/L EC50 6.15 -
		static 0.56: 96 h Cyprinus		9.26: 48 h Daphnia
		carpio mg/L LC50		magna mg/L EC50 Static
		semi-static		

12.2. Persistence and degradability

Persistence and Degradability: No information available.

12.3. Bioaccumulative potential

Bioaccumulation:

No information available.

Ingredients	LOGPOW
Urea	-1.59

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

Mobility:

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods Disposal of Wastes:

Contaminated Packaging: Other Information:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Do not re-use empty containers. Dispose of as unused product. Use up product completely. Packaging material is industrial waste.

Section 14: TRANSPORT INFORMATION

IMO / IMDG	
<u>14.1</u>	
UN-No: 14.2	Not regulated
Proper shipping name:	Not regulated
<u>14.3</u>	
Hazard Class:	Not regulated
<u>14.4</u> Packing group:	Not regulated
14.5	Not regulated
Marine Pollutant:	No information available
<u>14.6</u>	
Special Provisions 14.7	None
Transport in bulk according to Annex II of MARPOL 73/78	Not regulated
and the IBC Code	5
ADR/RID	
1.1.1	
<u>14.1</u> UN-No:	Not regulated
UN-No: 14.2	Not regulated
UN-No: <u>14.2</u> Proper shipping name:	Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u>	Not regulated
UN-No: <u>14.2</u> Proper shipping name:	-
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group:	Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u>	Not regulated Not regulated Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u> Environmental Hazard	Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u> Environmental Hazard <u>14.6</u>	Not regulated Not regulated Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u> Environmental Hazard	Not regulated Not regulated Not regulated Not regulated
UN-No: 14.2 Proper shipping name: 14.3 Hazard Class: 14.4 Packing group: 14.5 Environmental Hazard 14.6 Special Provisions	Not regulated Not regulated Not regulated Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u> Environmental Hazard <u>14.6</u> Special Provisions	Not regulated Not regulated Not regulated Not regulated
UN-No: 14.2 Proper shipping name: 14.3 Hazard Class: 14.4 Packing group: 14.5 Environmental Hazard 14.6 Special Provisions	Not regulated Not regulated Not regulated Not regulated
UN-No: <u>14.2</u> Proper shipping name: <u>14.3</u> Hazard Class: <u>14.4</u> Packing group: <u>14.5</u> Environmental Hazard <u>14.6</u> Special Provisions IATA <u>14.1</u>	Not regulated Not regulated Not regulated Not regulated None

Hazard Class: Not regulated 14.4
Packing group: Not regulated
<u>14.5</u>
Environmental Hazard Not regulated
<u>14.6</u>
Special Provisions None

Section 15: REGULATORY INFORMATION

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

<u>Belgium</u>

<u>Denmark</u> Danish Sikkerhedsgruppe	No data available	
France ICPE	Not regulated	
<u>Germany</u> LGK (Germany) Water Endangering Class (WGK): Gefahrstoffverordnung (Germany) TRGS 511	13 1 (Everris classification) Not regulated	
Component	Cormon WCK Soction	

Component	German WGK Section
Potassium sulphate; K ₂ SO ₄	class 1
7778-80-5 (40 - 65%)	
Urea	class 1
57-13-6 (25 - 40%)	
Sulphur; S	class 1
7704-34-9(1 - 5%)	
Magnesium oxide; MgO	class 1
1309-48-4(1 - 5%)	
Iron sulphate; FeSO4+1H2O	class 1
7720-78-7(0.1 - 1%)	
Manganese sulphate; MnSO4+1H2O	class 1
7785-87-7(< 0.1%)	

European Union

REACH:

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

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not Applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not Applicable

15.2 Chemical safety assessment Chemical Safety Report

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 if inhaled
- H411 Toxic to aquatic life with long lasting effects
- H316 Causes mild skin irritation

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 Globally Harmonized System of Classification and Labeling of Chemicals GHS: European Inventory of Existing Commercial Chemical Substances EINECS: Chemical Abstracts Service (division of the American Chemical Society) CAS: Predicted No Effect Concentration PNEC: Derived No-Effect Level DNEL: Registration, Evaluation, authorization of Chemicals Reach: EU-GHS; Classification, Labelling and Packaging CLP: **OEL: Occupational Exposure Limit** Time Weighted Average TWA: ATE: Acute Toxicity Estimate EUH statement: CLP (EU) specific hazard statement - Calculation method Classification procedure:

	- 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
Prepared by:	Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)
Issue Date:	30-Dec-2013
Revision Date:	03-Mar-2015
Reason for revision	*** Indicates changes since the last revision. This version replaces all previous versions

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

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