

Safety Data Sheet
according 1907/2006/EC (REACH), 2015/830/EU

Oligo Spectrum

Date : 01/01/2010

Version No. 4

Review date: 04/03/2020

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

Product identifier

1.1 A. Product name: **Oligo Spectrum**

1.2 Relevant identified uses of the substance or mixture and uses advised against Oligo-spectrum is a mixture of trace elements for plant nutrition in aqueous solution.

1.3 Details of the supplier of the safety data sheet

Supplier identification Terra Aquatica Sarl (GHE)
Address Route de Lecture, 32500 Fleurance
Phone number +33 (0)5 62 06 08 30
E-mail address info@eurohydro.com

1.4 Emergency telephone number

Medical services/ emergency services	15
Fire and rescue services	18
Police	17
EU Emergency call line	112
Toxicological Information Centre ORFILA (INRS)	01 45 41 59 59
Toxicological Information Centre South West	05 61 77 74 47

2 SECTION 2 : HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Reg. 1272/2008/CLP In accordance with Regulation 1272/2008 (CLP), the product is hazardous to aquatic fauna and flora.

Additional information :

Hazards for humans None

Environmental hazards None
 Physico-chemical hazards None
 Other hazards None

Labelling elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] and its adaptations

2.2 Hazard pictograms None
 Signal word Danger



Hazardous substances to be indicated on the label Cobalt Sulphate

Hazard statements H: H400 - Very toxic to aquatic organisms.
 H410 - Very toxic to aquatic organisms, causes long-term adverse effects.

Precautionary statements P: Phrases P
 P102 Keep out of reach of children

2.3 Other hazards
 Reg. 1272/2008/CLP None

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1	Substances	Non applicable	
3.2	Mixtures Name	Oligo-spectrum	
	Mixtures classified as dangerous	Non applicable	
	Description	Oligo-spectrum is a mixture whose proportions ensure optimal nutrition for plants. The exact nature of the salts as well as their proportions are a manufacturing secret. However, they are derived from: Boric acid, iron chelate EDDHA, iron chelate DPTA, manganese, copper and zinc chelate EDTA, ammonium molybdate and cobalt sulphate.	
	Chemical name	Concentration (%)	CAS number
	Calcium nitrate	5-10%	012054-85-2
	Magnesium nitrate	1-5%	10026-24-1

4 SECTION 4 : FIRST AID MEASURES

In general, if in doubt or if symptoms persist, seek medical attention. Do not give anything by mouth to an unconscious person.

4.1 Description of first aid measures

Following eye contact Wash immediately with plenty of water, keeping the eyelids well apart, and consult a specialist.

	Following skin contact	Rinse thoroughly with soapy water. Remove contaminated clothing. If the skin is red or puffy, if irritation persists, consult a doctor.
	Following ingestion	Do not induce vomiting. Rinse the mouth with water. Seek medical attention immediately by showing the product label.
	Following inhalation	Under normal conditions of use, inhalation is unlikely. If inhaled, move to fresh air. In case of breathing difficulties, consult a doctor as soon as possible.
	Self-protection of the first aider	Depending on the first aid context, wear appropriate protective equipment including a mask or filtered respirator. Always wear protective gloves and a resuscitation mask in case of artificial respiration. Wash hands thoroughly after first aid. If your clothing is contaminated with a chemical substance during first aid administration, change it.
	Other information	For further details of first aid administration, including but not limited to more serious health effects, the doctor may consult the Toxicological Information Centre, hotline: see section 1.4
4.2	Most important symptoms and effects, both acute and delayed	Not known effect
4.3	Indication of any immediate medical attention and special treatment needed	If decomposition products are inhaled in a fire, symptoms may be delayed. The exposed person may need to be placed under medical supervision for 48 hours.

5 SECTION 5 : FIREFIGHTING MEASURES

5.1	Extinguishing media	The product is not flammable. Fire hazard low due to the flammability characteristics of the product under normal storage, handling and use conditions. Suitable extinguishing media for a surrounding fire: In the event of continued combustion, caused by improper handling, storage or use, the following extinguishing media may be used: carbon dioxide (CO ₂), foam, chemical powders, and in the event of a widespread fire, also water spray. Inappropriate extinguishing media: In case of fire, do not use: Water jet
5.2	Special hazards arising from the substance or mixture	Due to its flammability characteristics, the product does not contain a fire hazard under normal conditions of storage, handling and use. A fire in the surrounding space will often produce thick black smoke. Exposure to compositional products may result in health hazards. Do not breathe fumes.
5.3	Tips for firefighters	<u>Protective actions to be taken during fire fighting</u> Quickly isolate the site by evacuating all persons from the area near the incident in case of fire. Do not take any action involving a personal risk or in the absence of adequate training. Keep containers away from fire if it can be done without risk. Use water or water spray to keep containers exposed to fire cool. <u>Appropriate protective equipment</u> The product is not combustible. In the event of fire in the surrounding area, appropriate extinguishing means and protective equipment for the other materials present (full protective clothing and personal respiratory equipment), complying with EN469 for a basic level of protection for chemical incidents, may be used. Have a minimum of emergency facilities or intervention elements (fireproof blankets, first-aid

kit...) according to Directive 89/654/EC.

5.4 Other information

Additional provisions:

Respond in accordance with the Inland Emergency Plan and the Accident and Emergency Response Information Sheets. Eliminate all sources of ignition. In case of fire, refrigerate containers and storage tanks for products that may ignite and explode as a result of high temperatures. Avoid spillage of products used to extinguish aquatic fires.

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Ensure good ventilation.

In case of accidental release of a large quantity, evacuate all personnel and allow access only to trained operators with appropriate personal protective equipment. (See section 8)

For emergency responders Workers will be equipped with personal protective equipment appropriate to the possible hazards.
(See section 8)

6.2 Environmental precautions



Avoid sewage, surface and ground water contamination. If this happens, inform the competent authorities.

6.3 Methods and material for containment and cleaning up

Do not bring spilled product into contact with combustible or non-combustible materials. Cleanup personnel must wear equipment to protect skin and eyes and to protect from vapors.

Recover the product as much as possible. Follow local legislation.

For containment: Sewer coverage

For cleaning up: Collect the spilled product by mechanical means and remove any residues by water jets. Provide adequate ventilation at the location of the spill. The disposal of the contaminated material must be carried out in accordance with the provisions of point 13.

Other information You can dispose of Oligo-spectrum Essentials as you would any industrial fertilizer.

6.4 Reference to other sections

Collect the remains in an identified container: see point 13 for disposal.

Personal protective equipment: see section 8

Withdrawal considerations: see section 13.

See section 1 for emergency contact information.

7 SECTION 7 : HANDLING AND STORAGE

7.1	Precautions for safe handling	<p>Avoid formation of suspended particles and dispersion of the product in the air.</p> <p>Provide adequate ventilation in areas where suspended particles develop.</p> <p>Keep away from flames and sparks. Do not smoke. Keep away from heat and other sources of fire.</p> <p>Do not eat, drink or smoke in work areas.</p> <p>Wash hands after each use.</p>
7.2	Conditions for safe storage, including any incompatibilities	<p>Ensure adequate local ventilation or exhaust.</p> <p>Store container upright, tightly closed in a cool, dry, well-ventilated place.</p> <p>Close containers before and after each use to avoid sources of moisture or heat.</p> <p>Store in labelled bottles.</p> <p>Store in areas with waterproof pavement.</p>
7.3	Specific end use(s)	<p>No specific end uses.</p> <p>Good practices: keep in closed containers. Close containers before and after each use to avoid sources of moisture or heat. Store in areas with waterproof pavement.</p>

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

8.1	Control parameters	<p>Not applicable</p> <p>Use good industrial hygiene practices.</p>
8.2	Exposure controls	
	Appropriate engineering controls	No particular control. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
	Individual protection measures, such as personal protective equipment	Use individual protections placed on the market in accordance with the provisions of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016. Personal protective equipment must be adapted to the risk, kept clean and properly maintained in accordance with the provisions of the Labour Code.
	Eye/face protection	It is necessary to wear protective glasses complying with standard NF EN166 before handling products.
	Skin protection	Hands: Wear suitable protective gloves in case of prolonged or repeated contact with the product. Use suitable protective gloves resistant to chemical agents in accordance with NF EN374.
	Respiratory protection	Ensure adequate ventilation, especially in enclosed areas. Respiratory protection device not required.
	Body protection	Wear appropriate protective clothing. After contact with the product, all parts of the body that have been in contact with the product must be thoroughly washed.
	Environmental exposure controls	No data available.

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties	
	Appearance	Physical state: All Oligo-spectrum compounds are in aqueous solution. Color: Brown
	Odour	None
	pH	In between 4 and 4.5
	Melting point	Not determined

Freezing point	Not determined
Initial boiling point and boiling range	Not determined
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Non inflammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	1.1
Solubility(ies) 20°C	Entirely soluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	Not determined
Oxidising properties	Not determined
Refraction index	Not determined
Rotary power	Not determined

9.2

Other information

No other information

10 SECTION 10 : STABILITY AND REACTIVITY

10.1	Reactivity	Stable. No particular risk of reaction with other materials under normal conditions of use.
10.2	Chemical stability	Oligo-spectrum is stable at room temperature in closed packages and under normal storage and handling conditions.
10.3	Possibility of hazardous reactions	No risk of dangerous reactions under normal use and storage conditions.
10.4	Conditions to avoid	No special conditions to avoid. Follow standard safety practices regarding chemicals.
10.5	Incompatible materials	No incompatible materials.
10.6	Hazardous decomposition products	None of the Oligo-spectrum components are subject to dangerous polymerization.

11 SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product/ingredient	Result	Species	Dosage	Exposition
Cobalt sulphate	DLC50 oral	Rat	768mg/kg	Non applicable
	DLC 50 Cutaneous	Rat	Non pertinent	Non applicable

Ammonium	DLC50 orale	Rat	Non pertinent	Non applicable
molybdate	DLC 50 Cutaneous	Rat	3883 mg/Kg	Non applicable

(b) skin corrosion/irritation;	In view of the available data, the classification criteria are not met.
(c) serious eye damage/irritation;	No known health damage resulting from exposure to the product.
(d) respiratory or skin sensitisation;	No known toxicological effects
(e) germ cell mutagenicity;	
(f) carcinogenicity;	
(g) reproductive toxicity;	
(h) STOT-single exposure;	
(i) STOT-repeated exposure;	
(j) aspiration hazard	
Symptoms related to the physical, chemical and toxicological characteristics	Ingestion: No known significant effects or critical hazards. Inhalation: No known significant effects or critical hazards. Skin Exposure: Mild irritation. No known significant effects or critical hazards. Eye Exposure: Mild irritation. No known significant effects or critical hazards.
Delayed and immediate effects as well as chronic effects from short- and long-term exposure	No known effect
Interactive effects	No known health effects
Absence of specific data	No data available
Mixtures	No data available
Mixture versus substance information	Mixture not containing substances subject to registration. No known adverse effects or symptoms resulting from exposure to the mixture or its components.
Other information	Comply with good industrial hygiene practices

12 SECTION 12 : ECOLOGICAL INFORMATION

12.1	Toxicity	Not applicable		
	Product/ingredient	Result	Species	Severe toxicity
	Cobalt sulphate	CL50	Fish	0.1-1 mg/L
		CE50	Crustaceous	0.1-1 mg/L
		CE50	Seaweed	0.1-1 mg/L
	Ammonium molybdate	CL50	Fish/96 h of exposure	25mg/L
12.2	Persistence and degradability	No data available at the present state of our knowledge.		
12.3	Bioaccumulative potential	No data available at the present state of our knowledge.		
12.4	Mobility in soil	No data available to date to the best of our knowledge.		
		Waste generation should be avoided or minimized as much as possible, and the product should not be discharged into sewers or waterways.		
12.5	Results of PBT and vPvB assessment	No data available to date to the best of our knowledge		
12.6	Other adverse effects	No data available to date to the best of our knowledge		

13 SECTION 13 : DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	<p>Do not discharge into sewers or waterways. Waste: Waste management is carried out without endangering human health and without harming the environment, including without creating a risk to water, air, soil, fauna and flora.</p> <p>Recycle or dispose of in accordance with current legislation, preferably by an approved collector or company.</p> <p>Disposal of the product/packaging: it is prohibited to discharge it into sewers or waterways. Residues and empty containers must be handled and disposed of in accordance with the relevant local/national legislation in force.</p> <p>Follow the provisions of Directive 2008/98/EC on waste management.</p> <p>Recover the product as much as possible. Follow local legislation.</p>
	Waste codes / waste designations according to Law:	Not applicable

14 SECTION 14 : TRANSPORT INFORMATION

Non-hazardous transport. In the event of an accident and product spillage, proceed as described in point 6

14.1	UN number	Non-hazardous transport
14.2	UN proper shipping name	Non-hazardous transport
14.3	Transport hazard class(es)	Non-hazardous transport
	ADR	Non-hazardous transport
	IMDG	Non-hazardous transport
	OACI/IATA	
14.4	Packing group	Non-hazardous transport
14.5	Environmental hazards	Non-hazardous transport
14.6	Special precautions for user	Do not transport with food products.
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Non applicable/ Non-hazardous transport

15 SECTION 15 :REGULATORY INFORMATION

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

15.1		
	Reg. 1272/2008/CE	The product does not contain substances that can be classified as carcinogenic. 1 or 2 according to Reg.1272/2008/EC and subsequent updates.
	Reg. 830/2015/CE (REACH)	Not applicable
	Special hazards	To our knowledge, none.
15.2	Chemical safety assessment	Evaluation not carried out

16.1	Abbreviations and acronyms:	<p>ETA = Acute Toxicity Estimation</p> <p>CLP = Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures</p> <p>DNEL = Derived no-effect dose</p> <p>DMEL = Derived no-effect dose</p> <p>EUH = Specific hazard statement CLP</p> <p>CPSE = Predicted no-effect concentration</p> <p>RRN = REACH registration number</p> <p>PTB = Persistent, Toxic and Bioaccumulative</p> <p>tPtB = Very persistent and very bioaccumulative</p> <p>bw = Body mass</p>
16.2	Key literature references and sources for data	<p>Regulation (EC) 1907/2006 of the European Parliament (REACH)</p> <p>Regulation (EC) 1272/2008 of the European Parliament (CLP)</p> <p>Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)</p> <p>Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)</p> <p>The Merck index. Ed. 10 Handling and chemical safety</p> <p>Niosh - Register of toxic effects of chemical substances</p> <p>INRS - Toxicological Data Sheet</p> <p>Patty - Industrial hygiene and toxicology</p> <p>N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed., 1989</p> <p>ECHA website</p> <p>EU REACH IUCLID5 CSR.</p> <p>National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.</p> <p>IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada. Règlement (CE) n ° 1272/2008 Annexe VI.</p>
16.3	Indication of changes:	<p>Compliance with the 16-point standard</p> <p>Trade name change from Essential to Oligo-spectrum</p>
16.4	Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:	<p>The indicated mixture does not require SDS according to REACH requirements. Data sheet provided for information purposes only.</p> <p>This safety data sheet complies with the requirements established by Regulation 830/2015/EU. It does not in any way exempt the user from knowing and applying all the documents that govern his activity. The user will take under his responsibility the precautions related to the specific use of the product. All the regulatory requirements mentioned are intended simply to assist the recipient in fulfilling their responsibilities. This list should not be considered exhaustive. This sheet supplements the technical operating instructions but does not replace them. The information contained herein is based on our knowledge of the product on the date indicated. They are given in good faith. In addition, the user's attention is drawn to the possible risks involved when a product is used for purposes other than those for which it was created. The addressee must ensure that he is not responsible for anything else according to texts other than those mentioned.</p>
	Note	

This safety data sheet has been prepared by Terra Aquatica on the basis of its current knowledge (manufacturer's active ingredient safety data sheet and other bibliographic data).

The information describes the safety aspects of the product. They are not intended to guarantee specific properties.

It is the responsibility of our customers to comply with the regulations in force.