

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

Flora Micro Hard Water

Date : 01 Janvier 2008

Version No. 2

Review date: 20juin2019

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

Product identifier

1.1 Product name: FLORA MICRO HARD WATER

1.2 Relevant identified uses of the substance or mixture and uses advised against **Relevant identified uses of the substance or mixture:**
FloraMicro Hard Water is a mixture of mineral salts formulated and mixed in proportions that ensure optimal plant nutrition.

Uses advised against:

Any use not specified in this section or in section 7.3

Use Descriptor System (REACH): No data available (not applicable).

1.3 Details of the supplier of the safety data sheet

Supplier identification	Général Hydroponics Europe
Address	4, boulevard du Biopole 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
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Fire and rescue services	18
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Police	17
1.4 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 No. 1272/2008 (CLP), the product is not considered dangerous.

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]

2.2 Hazard pictograms None
Signal word None
Hazardous substances to be indicated on the label None
Hazard statements H: None
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 FLORAMICRO HARD WATER
A natural mixture of minerals not containing substances classified as hazardous to health or the environment in accordance with the instructions of Directives 67/548/EEC and/or Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adaptations).
Composition: FloraMicro Hard Water is a mixture of mineral in aqueous solution, formulated and mixed in proportions that ensure optimal plant nutrition. The exact nature of the salts and their proportions are a trade secret

Chemical name	Concentration (%)	N°CAS
Ammonium nitrate	≥10 - ≤25	6484-52-2
Calcium ammonium nitrate	≥5 - ≤10	15245-12-2

4 SECTION 4 : FIRST AID MEASURES

No known incidents of damage to persons who have used this product.

However, in case of doubt or if symptoms persist, seek medical attention. Do not give anything by mouth to an unconscious person. The general measures described below should be adopted:

4.1 Description of first aid measures

Following eye contact Do not allow the victim to rub their eyes or keep their eyes closed. Immediately flush eyes, including under the eyelids, with plenty of clean, clear water for at least 15 minutes. Check if the victim is wearing contact lenses and if so, remove them. Consult a doctor immediately.

Following skin contact Rinse thoroughly with water with soap for at least 15 minutes. Remove contaminated clothing.

Following ingestion Rinse the mouth with water. If a person has swallowed this product and is conscious, give

	small amounts of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur
Following inhalation	If inhaled, move to fresh air. In case of breathing difficulties, consult a doctor as soon as possible.
Self-protection of the first aider	No action should be taken that involves an individual risk or in the absence of appropriate training. If it is suspected that fumes are present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It can be dangerous for the person assisting a victim to practice mouth-to-mouth. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
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	Potential acute health effects: No known effect / no data are available. Signs/symptoms of overexposure: No specific data.
4.3 Indication of any immediate medical attention and special treatment needed	Note to the attending physician Symptomatic treatment required. No special treatment. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 SECTION 5 : FIREFIGHTING MEASURES

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.

5.1 Suitable extinguishing media:
In the event of continued combustion, caused by improper handling, storage or use, the following extinguishing media may be used: carbon dioxide (CO₂), 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

Special hazards arising from the substance or mixture Hazards due to the substance or mixture:
Given its flammability characteristics, the product does not present a specific risk of fire or explosion under normal storage, handling and use conditions.

5.2 Risk related to thermal decomposition products:
A fire in the surrounding area will often produce thick black smoke. Exposure to compositional products may pose health risks. Do not breathe dust, vapours or fumes released by the combustion of the products.
Decomposition products may include the following materials:
Carbon dioxide
Carbon monoxide
Nitrogen oxides
Metal oxide / metal oxides

Advice for firefighters Protective actions to be taken when fighting fires

None

Appropriate protective equipment

5.3

The product is not combustible. In the event of a fire in the surrounding area, appropriate extinguishing media and protective equipment may be used for the other materials present (full protective clothing and personal respiratory equipment), in accordance with EN469 for a basic level of protection against chemical incidents. Have a minimum of emergency facilities or intervention elements (fire blankets, medicine kit, etc.) in accordance with Directive 89/654/EC.

Other information

Additional provisions:

5.4

Respond in accordance with the Internal Emergency Plan and the Fact Sheets on Accident and Other Emergency Response. Remove 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 spilling products used to extinguish the fire in the aquatic environment.

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

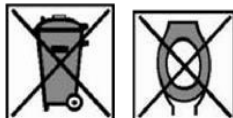
For non-emergency personnel

No action should be taken that involves an individual risk or in the absence of appropriate training. Evacuate the area. Prevent access to persons not required and not wearing protective clothing. DO NOT touch or walk in spilled material. Ensure adequate ventilation. Wear protective equipment.

For emergency responders

If specific clothing is required to handle the spill, refer to Section 8 for appropriate and inappropriate materials. See also the information contained in "For personnel other than response personnel"

Environmental precautions



6.2

Avoid contamination of soil, sewers, surface water and groundwater. If this happens, inform the competent authorities.

Methods and material for containment and cleaning up

6.3

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. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor The disposal of the contaminated material must be carried out in accordance with the provisions of point 13.

Reference to other sections

6.4

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

	Precautions for safe handling	Avoid the formation of suspended particles and the dispersion of the product in the air. Use adequate ventilation in areas where suspended particles develop. Keep away from flames and sparks. Do not smoke. Keep away from heat sources and other sources of fire.
7.1		Advice on professional hygiene in general: It is prohibited to eat, drink or smoke in areas where this product is handled, stored or used. It is recommended that staff wash their hands and face before eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering a food court. See also section 8 for more information on hygiene measures.
	Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store upright in the original container away from direct sunlight in a dry, cool and well-ventilated place away from incompatible materials (see section 10). Keep under lock and key. Keep container upright tightly closed when not in use. Containers that have been opened must be carefully closed again and kept in an upright position to prevent leaks. Do not store in unlabelled containers. Do not store in the presence of food products. Use an appropriate container to avoid contamination of the surrounding environment. Surround storage facilities with containment dykes to prevent soil and water pollution in the event of a spill.
7.2		
	Specific end use(s)	No specific end uses. 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.
7.3		

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

8.1	Control parameters	Not applicable
		Use good industrial hygiene practices.
8.2	Exposure controls	
	Appropriate engineering controls	No particular control. Good general ventilation should be sufficient to control workers' exposure to airborne contaminants.
	Individual protection measures, such as personal protective equipment	No personal protection required. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. If needed, in general, 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 in accordance with NF EN166 before handling any chemical products.
	Skin protection	Hands: Wear suitable protective gloves in case of prolonged or repeated contact with the product. Use suitable chemical-resistant protective gloves in accordance with NF EN374. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
	Respiratory protection	Ensure adequate ventilation, especially in enclosed areas.

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 washed.
Environmental exposure controls	No data available. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9 SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Physical state: All FloraMicro Hard Water compounds are in aqueous solution (liquid) Color: brown (dark brown).
Odour	No odor
pH	5.6
Melting point	Not Applicable
Freezing point	-1.11°C (30°F)
Initial boiling point and boiling range	102.778°C (217°F)
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Non inflammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	1.108
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	None
Oxidising properties	None
Refraction index	Not determined
Rotary power	Not determined

9.2 Other information

No other information

10 SECTION 10 : STABILITY AND REACTIVITY

10.1	Reactivity	No specific reactivity test data are available for this product or its components in normal conditions of use.
10.2	Chemical stability	The product is stable at room temperature in closed packages and under normal storage and handling conditions. No hazardous polymerization can be produced by any of these components

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. Comply with usual precautionary practices regarding chemicals.
10.5	Incompatible materials	FloraMicro Hard Water contains elements that are powerful oxidants that can react with strong bases to release ammonium. It can also react with powerful reducers.
10.6	Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) acute toxicity;

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium nitrate	LD50 Oral	Rat	2217 mg/kg	-
Ammonium sulfate	LD50 Oral	Rat	2840 mg/kg	-
Urea	LD50 Oral	Rat	8471 mg/kg	-

(b) skin corrosion/irritation;

Product/ingredient name	Result	Species	Score	Exposure	Observation
Urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

(c) serious eye damage/irritation;

(d) respiratory or skin sensitisation;

(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: Slight irritation. No known significant effects or critical hazards.

Eye exposure: Slight irritation. No known significant effects or critical hazards.

Health effects are considered unlikely if the product is used as recommended.

Delayed and immediate effects as well as chronic effects from short- and long-term exposure

Numerical measures of toxicity

Route	ATE value
Oral	12191.4mg/kg

Interactive effects No data available

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	No known significant effects or critical hazards.		
	Product/ingredient name	Result	Species	Exposure
	Ammonium nitrate	Chronic NOEC 6 to 12 mg/L Fresh water	Crustaceans - Cladocera Crustaces	21 days
12.2	Persistence and degradability	There is no data available.		
12.3	Bioaccumulative potential	There is no data available.		
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	There is no data available.		
12.6	Other adverse effects	No known significant effects or critical hazards.		

13 SECTION 13 : DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	<p>Do not discharge into my sewers or waterways.</p> <p>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. 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>FloraMicro HardWater can be disposed of in the same way as any industrial fertilizer.</p> <p>Recover the product as much as possible. Follow local legislation.</p>		
	Waste codes / waste designations according to LoW:	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	Not regulated. Non-hazardous transport
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
	ADR	Not regulated. Non-hazardous transport
	IMDG	

OACI/IATA

14.4	Packing group	-
14.5	Environmental hazards	No
14.6	Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not available

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, no other national or governmental regulations apply.
15.2	Chemical safety assessment	Evaluation not carried out

16 SECTION 16 : OTHER INFORMATION

	Abbreviations and acronyms:	ETA = Acute Toxicity Estimation CLP = Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures DNEL = Derived no-effect dose DMEL = Derived no-effect dose EUH = Specific hazard statement CLP CPSE = Predicted no-effect concentration RRN = REACH registration number PTB = Persistent, Toxic and Bioaccumulative tPtB = Very persistent and very bioaccumulative bw = Body mass
16.1	Key literature references and sources for data	Regulation (EC) 1907/2006 of the European Parliament (REACH) Regulation (EC) 1272/2008 of the European Parliament (CLP) Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP) Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)
16.2		The Merck index. Ed. 10 Handling and chemical safety Niosh - Register of toxic effects of chemical substances INRS - Toxicological Data Sheet Patty - Industrial hygiene and toxicology N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed., 1989

ECHA website
EU REACH IUCLID5 CSR.
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.
IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada. Règlement (CE) n ° 1272/2008
Annexe VI.

16.3 Indication of changes:

Date of revision: 20/06/2019
Previous version date: 01/01/2008
Version: 3
Amendment: compliance with European legislation in 16 points.
Amendment section 9.1
Amendment section 11.
Amendment section 12.

**16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
Note**

Not applicable, to the best of our knowledge

The indicated mixture does not require an MSDS according to REACH requirements. Form prepared for information purposes.

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.