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

FloraNova Bloom

Date : 01 Janvier 2008 Version No. 4 Review date: 03/15/2017

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

Product identifier

1.1 Product name: FLORANOVA BLOOM

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

Relevant identified uses of the substance or mixture:

Hydroponic plant nutrient to promote vigorous flowering and fruit set

Uses advised against:

Any use not specified in this section or in section 7.3

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**
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 No. 1272/2008 (CLP), the product is not considered dangerous.

Additional information :

Hazards for humans	H319 - Causes serious eye irritation
Enviromental hazards	None
Physico-chemical hazards	None
Other hazards	None

Labelling elements

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

2.2 Hazard pictograms

Signal word	Warning
Hazardous substances to be indicated on the label	None
Hazard statements H:	H319 - Causes serious eye irritation

2.3 Other hazards

Reg. 1272/2008/CLP	None
Precautionary statements P:	Phrases P Prevention P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling. Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Non applicable

3.2 Mixtures
Name FLORANOVA BLOOM

Ingredient name	%	CAS number
Calcium ammonium nitrate 1H,3H-Pyrano[4,3-b][1]Benzopyran-9-carboxylic Acid, 4,10-dihydro-3,7,8-trihydroxy-3-methyl10-oxo-	≥25 - ≤50 ≥5 - ≤10	15245-12-2 479-66-3
Magnesium nitrate hexahydrate	≥3 - ≤5	13446-18-9
Cobalt(II) nitrate hexahydrate	<0.025	10026-22-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 SECTION 4 : FIRST AID MEASURES

4.1 **Description of first aid measures**

Following eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Following skin contact	Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Following ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Following inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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
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:

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Signs/symptoms of overexposure:

Eye contact : Adverse symptoms may include the following: pain or irritation watering redness

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

4.3	**Indication of any immediate medical attention and special treatment needed**	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. No specific treatment.

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: Use an extinguishing agent suitable for the surrounding fire or 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
5.2	**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. 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 sulfur oxides phosphorus oxides metal oxide/oxides
5.3	**Advice for firefighters**	<u>Protective actions to be taken when fighting fires</u> No special measures are required <u>Appropriate protective equipment</u> 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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Have a minimum of emergency facilities or intervention elements (fire blankets, medicine kit, etc.) in accordance with Directive 89/654/EC.

5.4 **Other information**

Additional provisions:

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**

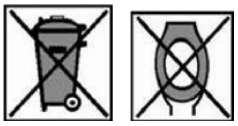
For non-emergency personnel

No action should be taken that involves an individual risk or in the absence of appropriate training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal 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"

6.2 **Environmental precautions**



Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 **Methods and material for containment and cleaning up**

For containment:

Sewer coverage

For cleaning up:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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**

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

7.2 **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 container tightly closed and sealed until ready for use. 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.

Specific end use(s)

No specific end uses.

7.3

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.

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

8.1 **Control parameters**

Not applicable

Use good industrial hygiene practices.

8.2 **Exposure controls**

Ingredient name	Exposure limits
Calcium ammonium nitrate	None
1H,3H-Pyrano[4,3-b][1]Benzopyran-9-carboxylic Acid, 4,10-dihydro-3,7, 8-trihydroxy-3-methyl-10-oxo.	None
Magnesium nitrate hexahydrate	None
Cobalt(II) nitrate hexahydrate	ACGIH TLV (United States, 3/2016). TWA: 0.02 mg/m³, (as Co) 8 hours.

Appropriate engineering controls

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location

Individual protection measures, such as personal protective equipment

No personal protection required. 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

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles in accordance with NF EN166.

Skin protection

Hands: Wear suitable protective gloves in case of prolonged or repeated contact with the product.

Chemical-resistant, impervious gloves complying with an approved standard (NF EN374) should be worn at all times when handling chemical products if a risk assessment indicates this is

	necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Respiratory protection	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. 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.
Environmental exposure controls	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: liquid Color: Brown
Odour	Sweet vanilla like
pH	Not available
Melting point	Not available
Freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1.5
Solubility(ies) 20°C	Entirely Soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available
Refraction index	Not available
Rotary power	Not available

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**

Not available.

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

Ingredient name	Result	Species	Dose	Exposure
Calcium ammonium nitrate	LD50 Oral	Rat	4715 mg/kg	-
Magnesium nitrate hexahydrate	LD50 Oral	Rat	5440 mg/kg	-
Cobalt(II) nitrate hexahydrate	LD50 Oral	Rat	691 mg/kg	-

(b) skin corrosion/irritation;

Ingredient name	Result	Species	Score	Exposure	Observation
Magnesium nitrate hexahydrate	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

(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

There is no data available.

Symptoms related to the physical, chemical and toxicological

Ingestion: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

	characteristics	Skin exposure: No known significant effects or critical hazards. Eye exposure: pain or irritation watering redness
	Delayed and immediate effects as well as chronic effects from short- and long-term exposure	No known significant effects or critical hazards.
	Interactive effects	No known significant effects or critical hazards.
	Absence of specific data	No known significant effects or critical hazards.
	Mixtures	No known significant effects or critical hazards.
	Mixture versus substance information	No known significant effects or critical hazards.
	Other information	No known significant effects or critical hazards.

12 SECTION 12 : ECOLOGICAL INFORMATION

12.1	**Toxicity**	No data available to date to the best of our knowledge
12.2	**Persistence and degradability**	No data available to date to the best of our knowledge
12.3	**Bioaccumulative potential**	No data available to date to the best 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**	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**	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
	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

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

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

16.3 Indication of changes:

Date of revision: 03/15/2017

Previous version date: 06/30/2016

Version: 4

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

Not applicable, to the best of our knowledge

Note

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 user must ensure that he is not responsible for anything else according to texts other than those mentioned.