Safety Data Sheet dated 02/07/2018, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification: EC Fertilizer - Inorganic secondary nutrient fertilizer
Trade name: **FISIOCAL**

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

Recommended use:

Professional use in agriculture for acknowledged need

Uses advised against:

All uses not listed in the uses recommended.

1.3. Details of the supplier of the safety data sheet

Company:
GREEN HAS ITALIA SPA
Corso Alba 85/89
12043 CANALE (CN)
Tel. 0173 95433
Fax. 0173 979464
www.greenhasitalia.com
Office hours (8/13 - 14/18)

Competent person responsible for the safety data sheet:

security@greenhasitalia.com

1.4. Emergency telephone number

Tel. 0173 95433
Fax. 0173 979464
www.greenhasitalia.com
Office hours (8/13 - 14/18)
Antipoison Center - Ospedale Niguarda Ca' Granda – Milano – Telephone nbr. 02-66101029

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Warning, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Warning

Hazard statements:

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/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.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 30% - < 40%	Calcium chloride	Index number: 017-013-00-2 CAS: 10043-52-4 EC: 233-140-8 REACH No.: 01-21194942 19-28-XXXX	3.3/2 Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

Call a doctor if you feel unwell and show him, if possible, this material safety data sheet or product label. First aid responders shall wear appropriate personal protective equipment (see SECTION 8.2).

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Carbon dioxide (CO_2)
Extinguishing media which must not be used for safety reasons:
None

5.2. Special hazards arising from the substance or mixture

Hazardous thermal decomposition products: product is not combustible; if heated enough, as in case of fire, it could decompose with gas emission.

5.3. Advice for firefighters

Evacuate and seal off area until fire is completely extinguished, and restrict the access only to trained personnel: have always to wear special protective equipment: facepiece respirator with air supply [ref. EN 137]; protective clothing [ref. EN 469]; protective gloves [ref. EN 659]; boots for firefighters [ref. HO A29-A30]. Avoid breathing vapour/gas. Work windward. Remove containers from fire, if it could be done without any risk. Alternatively, keep containers cool with water spray. Avoid contaminated cooling water to flow down the drains or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove persons to safety.
Remove all sources of ignition.

6.1.1 For non-emergency personnel:

Operate in accordance with the provisions of the emergency plan. Alert the emergency personnel. Avoid generating and spreading dust. Avoid inhalation of dust and contact with eyes and skin. Where necessary, wear appropriate personal protective equipment (see SECTION 8.2).

6.1.2 For emergency responders:

Operate in accordance with the provisions of the emergency plan. Evacuate and isolate the area until complete dispersion of the substance. Ensure adequate ventilation. Avoid generating and spreading dust. Avoid inhalation of dust and contact with eyes and skin. Wear appropriate personal protective equipment (see SECTION 8.2).

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
Store in a cool, well-ventilated place at temperatures between 0° - 40°C

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

Calcium chloride - CAS: 10043-52-4

Worker Professional: 0.005 mg/l - Consumer: 0.0025 mg/l - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 0.01 mg/l - Consumer: 0.005 mg/l - Exposure: Human Inhalation - Frequency: Short Term, local effects

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Sealed goggles (according to European standard EN 166)

Protection for skin:

Wear suitable clothes depending on the quantity and concentration of the substance in the workplace.

Protection for hands:

Nitrile rubber: glove thickness > 0,11 mm, breakthrough time (permeation) > 480 min (according to European standard EN 374)

Respiratory protection:

During normal operations, personal respiratory protection is not required. In case of vapors/gas formation use facemask fitted with B filter (ref. EN 141).

Thermal Hazards:

None

Environmental exposure controls:

Dispose of washing water according to local and national regulations and ensure that atmospheric emissions are under control and within the limits of local regulations.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	brown liquid	--	--
Odour:	characteristic	--	--
Odour threshold:	Not available	--	--
pH:	7.0	--	--
Melting point / freezing point:	-5° - 0°C	--	--
Initial boiling point and boiling range:	>100°C	--	--
Flash point:	N.A.	--	Mixture with inorganic components (Annex VII 7.9 Column 2 REACH Regulation)
Evaporation rate:	Not available	--	--
Solid/gas flammability:	N.A.	--	Mixture with inorganic components (Annex VII 7.9 Column 2 REACH Regulation)
Upper/lower flammability or explosive limits:	N.A.	EN 50281-2-1	Non-flammable
Vapour pressure:	N.A.	--	Annex VII 7.5 Column 2 REACH Regulation
Vapour density:	Not available	--	--
Relative density:	1.40 g/ml	--	--

Solubility in water:	Total	--	--
Solubility in oil:	Not available	--	--
Partition coefficient (n-octanol/water):	N.A.	--	Mixture with inorganic components (Annex VII 7.8 Column 2 REACH Regulation)
Auto-ignition temperature:	N.A.	--	Annex VII 7.12 Column 2 REACH Regulation
Decomposition temperature:	Not available	--	--
Viscosity:	11s	Coppa Ford (Ø 4mm)	--
Explosive properties:	N.A.	--	Annex VII 7.11 Column 2 REACH Regulation
Oxidizing properties:	N.A.	--	Non-oxidant

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Not Relevant	--	--
Fat Solubility:	Not Relevant	--	--
Conductivity:	900 microS/cm	sol. 1 g/l	--
Substance Groups relevant properties	Not Relevant	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

N.A.

10.2. Chemical stability

Stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Stable under normal conditions.

N.A.

10.5. Incompatible materials

Acids substances.

10.6. Hazardous decomposition products

Stable at room temperature.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

Calcium chloride - CAS: 10043-52-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 3798-4179 mg/kg
Test: LD50 - Route: Oral - Species: Mouse = 1940-2045 mg/kg
Test: LD50 - Route: Oral - Species: Rabbit = 500-1000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

a) acute toxicity;
b) skin corrosion/irritation;

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.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.
Calcium chloride - CAS: 10043-52-4
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 4630 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia = 2400 mg/l - Duration h: 48
Endpoint: NOEC - Species: Daphnia = 2000 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae = 2900 mg/l - Notes: biomassa
Endpoint: EC50 - Species: Algae > 4000 mg/l - Notes: tasso di accrescimento

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Eye Irrit. 2	3.3/2	Eye irritation, Category 2

This safety data sheet has been completely updated in compliance to Regulation 2015/830.
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Eye Irrit. 2, H319	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
Workers encharged for product handling should be informed about its hazard and potential risks related to its use and be instructed on the precautions to be taken in order to avoid or limit exposure.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

	Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.