
VALAGRO SDS according to Regulation (EU) N. 2015/830
Date: 23/10/2015 Rev. 1.2
Product: Nutri One microgranular
Code: 12386
Print Date: 23 October 2015

SAFETY DATA SHEET

Nutri One microgranular

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

1.1. Product identifier

Mixture identification:

Trade name: Nutri One microgranular

Trade code: 12386

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

Fertilizer

1.3. Details of the supplier of the safety data sheet

Company:

VALAGRO Spa

Via Cagliari, 1 Zona Industriale

66041 Atessa (CH) ITALY

Tel. (+39) 08728811 Fax (+39) 0872881382

www.valagro.com

Competent person responsible for the safety data sheet:

regulatory@valagro.com

1.4. Emergency telephone number

VALAGRO SPA - Telephone (+39) 0872 8811; Telefax number. (+39) 0872 881382 (Monday to Friday from 8:30 to 13:00 and 14:00 to 17.30 (GMT+1))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Symbols:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

EUH210 Safety data sheet available on request.

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

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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
>= 5% - < 7%	iron (II) sulfate	Index number: 026-003-00-7 CAS: 7720-78-7 EC: 231-753-5 REACH No.: 01-2119513203-57-xxxx	 3.3/2 Eye Irrit. 2 H319  3.2/2 Skin Irrit. 2 H315  3.1/4/Oral Acute Tox. 4 H302

For full text of H-statements and R-phrases: see SECTION 16

SECTION 4: First aid measures

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.

If irritation develops, get medical attention.

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 ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Never give anything by mouth to an unconscious person; if person is conscious rinse mouth with water and then give plenty of water to drink. Do not induce vomiting unless instructed to do so by medical personnel. 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

No data available for the mixture.

Possible symptoms that may occur:

Inhalation:

May cause irritation to the respiratory tract

Symptoms: cough, shortness of breath

Eyes and skin:

May cause irritation to skin and eyes according to the contact time with the product

Symptoms: redness, itching, pain

Ingestion:

May cause irritation to the gastrointestinal tract

The product dissolved in water or in presence of moisture, cause an acid reaction and if

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swallowed can cause irritation and burns of the mouth, throat and digestive tract.

Symptoms: vomiting, stomach pains

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:

In case of incident seek medical advice showing the safety data sheet

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke containing nitrogen oxides (NO_x), phosphorus oxides (PO_x),

Sulfur oxides (SO_x)

5.3. Advice for firefighters

Use suitable breathing apparatus, protective clothing, eye protection and gloves resistant to chemicals according to EN469.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training

Wear protective clothes giving a total skin protection, gloves and safety glasses.

Keep away from the affected area people not involved in the emergency intervention.

Ensure adequate ventilation.

Alert the internal emergency team.

For emergency responders:

Wear protective clothes giving a total skin protection, gloves (e.g. P.V.C., neoprene or rubber) and safety glasses.

See protective measures under point 7 and 8.

Remove people to safety.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Dilute with water and retain contaminated wash water and dispose in authorized facilities or pick up in clean plastic labeled containers and reuse as fertilizer.

In case of seepage into waterways, soil or sewage system inform authorities responsible.

Material suitable for collecting: absorbent material, soil, sand

Collect the product absorbed for example using shovel and broom

In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

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Wash with plenty of water.

Collect the product absorbed for example using shovel and broom

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.

Contaminated 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:

Strong acids and bases, oxidizing and reducing agents

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available for the mixture

ACGIH (2003) : recommended value inhalable dust: TLV/TWA: 10 mg/m³

ACGIH (2003) : recommended value breathable dust: TLV/TWA: 3 mg/m³

Exposure limit Iron (Fe) –TWA:1 mg/m³ soluble salts

Critical effect: skin and respiratory tract irritation

Iron (II) sulfate CAS: 7720-78-7:

DNEL Exposure Limit Values

Consumer:

DNEL (oral) mg/Kg/day = 0.8 Assumes 24 h/d exposure

DNEL (dermal) mg/Kg/day = 0.8 Assumes 24 h/d exposure

DNEL (inhalation) mg/m³ = 1.4 Assumes 24 h/d exposure

Worker:

DNEL (orale) mg/Kg/day = N.A. Assumes 8 h/d exposure

DNEL (skin) mg/Kg/day = 1.6 Assumes 8 h/d exposure

DNEL ((inhalation) mg/m³ = 5.5 Assumes 8 h/d exposure

PNEC Exposure Limit Values

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	Value
PNEC _{sediment} (g Fe/kg dwt)	49.5
PNEC soil (g/kg dwt)	55
PNEC _{stp} (mg Fe/L)	500

8.2. Exposure controls

Please observe the usual precautionary measures for handling of chemicals.

The personal protective equipment must be compliant to the regulation UNI –EN in force

Eye protection:

Use close fitting safety goggles according to the standard EN 166, don't use eye lens

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber according to EN 374

Respiratory protection:

In case of dust generation, use anti-powder mask with P2 filters according to the EN 149:2001.

The powder exposition limit must be respected

Thermal Hazards:

Burning produces heavy smoke containing nitrogen oxides (NO_x), phosphorus oxides (PO_x), Sulfur oxides (SO_x)

Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour:	black microgranules
Odour:	Characteristic
Odour threshold:	N.A.
pH 1% at 20°C:	4.0
Melting point / freezing point:	not applicable, solid
Initial boiling point and boiling range:	not applicable, solid
Flash point:	not applicable, solid
Evaporation rate:	not applicable, solid
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	not applicable, solid
Vapour pressure:	not applicable, solid
Relative density:	N.A.
Solubility in water:	not soluble
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	not applicable, solid

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Explosive properties: not applicable, the product doesn't contain any explosive substance

Oxidizing properties: not applicable, the product doesn't contain any explosive substance

9.2. Other information

Miscibility: N.A.

Fat Solubility: N.A.

Conductivity: N.A.

Substance Groups relevant properties N.A.

Apparent density: 1,1 Kg/dm³

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of handling and storage.

10.2. Chemical stability

Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions

The contact with alkaline substances can release ammonia.

10.4. Conditions to avoid

Avoid high temperatures

10.5. Incompatible materials

Strong acids Bases, oxidizing and reducing agents

10.6. Hazardous decomposition products

At high temperatures and in case of fire nitrogen oxides (NO_x), phosphorus oxides (PO_x), Sulfur oxides (SO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

Iron sulfate CAS: 7720-78-7:

a) acute toxicity:

oral

Ferrous sulfate heptahydrate

Test OECD TG 401 and GLP

Rat LD50 mg Fe / kg bw > 400

LD50 mg salt / kg bw > 2000

Ref MHLW, Japan, 2003

Skin

LD50 > 2000 mg / kg bw

inhalation:

N.A.

b) skin corrosion/irritation:

Iron sulphate solid

Test OECD TG 404 and GLP rabbit

Result: irritant

Skin Irrit. 2 H315

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- c) serious eye damage/irritation:
Eye Irrit. 2 H319 Causes severe eye irritation.
- d) respiratory or skin sensitisation:
Skin: Not classified as a sensitizer
Respiratory system: N.A.
- e) germ cell mutagenicity:
Not classified as a mutagen
- f) carcinogenicity:
Not classified as a carcinogen
- f) reproductive toxicity:

Iron sulfate heptahydrate	rat	Fertility NOAEL	≥1000 mg/kg body weight/day (≥200 mg Fe/kg bw/day)	MHLW, Japan, 2003
	rat	Development NOAEL	≥1000 mg/kg body weight/day (≥200 mg Fe/kg bw/day)	MHLW, Japan, 2003

- h) STOT-single exposure:
N.A.
- i) STOT-repeated exposure:
N.A.
- j) aspiration hazard:
N.A.

No data available for the mixture.

Most important symptoms and possible effects based on iron sulfate:

Inhalation:

May cause irritation to the respiratory tract

Cough, sore throat

Symptoms: cough, shortness of breath

Eyes and skin:

May cause irritation to skin and eyes according to the contact time with the product

Symptoms: redness, itching, pain

Ingestion:

May cause irritation to the gastrointestinal tract

The product dissolved in water or in presence of moisture, cause an acid reaction and if swallowed can cause irritation and burns of the mouth, throat and digestive tract.

Symptoms: vomiting, stomach pains

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SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

The product, if released into the environment at high concentrations leads to the effects of eutrophication.

Iron sulfate CAS: 7720-78-7:

Short-term toxicity data for fish

Iron salt	Test organism	Duration	Endpoints	LC50 (mg/l) ¹	Reliability	Reference
FeSO ₄	<i>Salvelinus fontinalis</i>	96 h	Survival (pH 5.5)	0.41	2	Decker and Menendez (1975)
			Survival (pH 6.0)	0.48		
			Survival (pH 7.0)	1.8 (m.d)		

Long-term toxicity data for fish:

Iron salt	Test organism	Duration	Endpoints	NOEC (mg/L) ¹	LOEC (mg /L) ¹	Reliability	Reference
FeSO ₄ .7H ₂ O	<i>Lampetra fluviatilis</i> (Lamprey)	72 h	Hatching	-	1.1 (EC50) (n.t)	2	Myllynen et al. (1997)
FeSO ₄ neutralised with stoichiometric amount of calcium hydroxide	<i>Pimephales promelas</i>	12 months	Growth Hatching (at pH 6.9-7.2)	0.24 (n.t)	1.5 (n.t)	2	Smith et al. (1973)

Short-term toxicity data for aquatic invertebrates

Iron salt	Test organism	Duration	Endpoints	EC50 (mg/l) ¹	Reliability	Reference
FeSO ₄	<i>Daphnia magna</i>	24 h	Immobility (pH 7.6)	5.3 (n.t)	2	Lilius et al. (1995)

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Chronic toxicity data for iron salts

Iron salt	Test organism	Duration	Endpoints	NOEC (mg /L) ¹	LOEC (mg /L) ¹	Reliability	Reference
FeSO ₄ ·7H ₂ O	<i>Daphnia magna</i>	21 days	Reproduction (at pH 7.0-8.5)	10 (n.ts) 2 (n.t)	13 (n.ts) 2.6 (n.t)	1	MOE, Japan (2002)

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

Soluble and mobile in both terrestrial and aquatic compartments

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Packaging: Dispose according to regulations.

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

ADR-Environmental Pollutant: No

IMDG-Marine pollutant: No

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)

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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)

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 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).
1999/13/EC (VOC directive)

Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):

N.A.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Text of phrases referred to under heading 3:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H302 Harmful if swallowed.

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

CCNL - Appendix 1

Insert further consulted bibliography

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.

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.

Paragraphs modified from the previous revision: 1;2;3;4;5;6;8;9;10;11;12;14;15.

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.

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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.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.
N.A.:	No data available