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VALAGRO SDS according to Regulation (EU) N. 2015/830  
Date: 15/01/2018 Rev. 1.0  
Product: Opifol Reproductive  
Code: 12597  
Print Date: 16 January 2018

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## **SAFETY SHEET**

### **Opifol Reproductive**

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

1.1. Product identifier

Mixture identification:

Trade name: Opifol reproductive

Trade code: 12597

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

Recommended use:

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](mailto: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)

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#### **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 Exposed skin 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.

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P337+P313 If eye irritation persists: Get medical advice/attention.

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
>= 1% - < 3%	Manganese sulphate	CAS: 7785-87-7 EC: 232-089-9 REACH No.: 01- 2119456624- 35-xxxx	 3.3/1 Eye Dam. 1 H318  3.9/2 STOT RE 2 H373  4.1/C2 Aquatic Chronic 2 H411
>= 0.25% - < 0.5%	Sodium Molybdate	CAS: 10102-40-6 EC: 231-551-7 REACH No.: 01- 2119489495- 21-xxxx	Substance with a Union workplace exposure limit.

For full text of H-statements : see SECTION 16

### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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 with plenty of water and soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

Inhalation:

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Possible irritation of respiratory tract  
Symptoms: cough, shortness of breath

Skin:

Possible irritation according to the contact time with the product  
Symptoms: redness, itching, pain.

Eye:

Causes serious eye irritation  
Symptoms include pain and redness

Ingestion:

Possible irritation of mouth and digestive tract.  
Symptoms: abdominal pain, gastrointestinal disorders

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

Treatment:

N.A.

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## SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

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.

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.

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## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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 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.

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

Material suitable for collecting: absorbent material

6.3. Methods and material for containment and cleaning up

Avoid raising dust

Pick up the product in clean plastic labeled containers and reuse as fertilizer or dispose in authorized facilities

Collect the product for example using shovel and broom

Wash with plenty of water.

Material suitable for collecting: absorbent material

6.4. Reference to other sections

See also section 8 and 13

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## SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Avoid dust generation and Keep away from sources of ignition

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 in original containers tightly closed in a well-ventilated place far from humidity, heat and ignition sources. Avoid exposure to direct sunlight

Incompatible materials:

Oxidizing and reducing agents, acids, bases

Instructions as regards storage premises:

Adequately ventilated, cool and dry premises.

7.3. Specific end use(s)

None in particular

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## SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available.

General exposure limit for dust:

ACGIH : recommended value inhalable dust: TLV/TWA: 10 mg/m<sup>3</sup>

ACGIH : recommended value breathable dust: TLV/TWA: 3 mg/m<sup>3</sup>

- Manganese sulphate - CAS: 7785-87-7

Exposure limit Manganese (Mn) TWA 0.2 mg/m<sup>3</sup> inorganic compounds

Critical effect: central nervous system

Workers:

DNEL skin = 0.00414 mg / kg / day

DNEL inhalation = 0.2 mg / kg / day

Population:

DNEL skin = 0.0021 mg / kg / day

DNEL inhalation = 0.043 mg / m<sup>3</sup>

Environment:

PNEC water (fresh water) = 0.0128 mg / l

PNEC water (sea water) = 0.0004 mg / l

PNEC water (intermittent emissions) = 0.03 mg / l

PNEC STP = 56 mg / l

PNEC sediment (fresh water) = 0.0114 mg / kg dw sediment

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PNEC sediment (sea water) = 0.00114 mg / kg dw sediment

PNEC soil = 25.1 mg / kg soil dw

- Sodium Molybdate - CAS: 10102-40-6  
Exposure limit Molybdenum (Mo) TWA 0.5 mg/m<sup>3</sup> soluble compounds  
Critical effect: respiratory tract irritation

## 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:

Wear protective clothing according to the standard EN 14605.

### Protection for hands:

Gloves in nitrile according to the EN 374.

### Respiratory protection:

Not needed for normal use. In case of dust generation, use anti-powder mask with P2 filters according to the EN 149:2001.

### Thermal Hazards:

None Known

### Environmental exposure controls:

None

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance and colour:	violet powder
Odour:	Characteristic
Odour threshold:	N.A.
pH 1% (water):	3.7 at 20°C
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A.
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Apparent density:	1,3 Kg/dm <sup>3</sup>
Solubility in water:	200 g/l at 20°C
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A.
Oxidizing properties:	N.A.

### 9.2. Other information

Miscibility: N.A.

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Fat Solubility: N.A.  
Conductivity(1%): N.A.  
Substance Groups relevant properties N.A.

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## SECTION 10: Stability and reactivity

- 10.1. Reactivity  
Stable under normal conditions of use and storage
  - 10.2. Chemical stability  
Stable under normal conditions of use and storage
  - 10.3. Possibility of hazardous reactions  
At high temperatures, which induce thermal decomposition, the product may release hazardous gases
  - 10.4. Conditions to avoid  
Avoid high temperatures that induce thermal decomposition  
Avoid dust generation.
  - 10.5. Incompatible materials  
Oxidizing and reducing agents, acids, bases.
  - 10.6. Hazardous decomposition products  
In case of fire and high temperatures can develop nitrogen oxides, phosphorus oxides, sulphur oxides.
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## 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:

- a) acute toxicity:
  - manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
LD50 Oral = 2150 mg/Kg Singh PP and Junnarkar AY (1991)  
LC50 Inhalation > 4.98 mg/l Griffiths, DR (2010)  
Skin: Manganese sulphate, absorption through skin is unlikely
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
LD50 Dermal (rat) > 2000 mg / kg body weight  
LC50 Inhalation (rat male/female): 1.93 mg/l/4h
- b) skin corrosion/irritation:
  - manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
in vivo test on rabbit OECD 404: Not irritating - Ref .Pooles (2010)
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Not irritant
- c) serious eye damage/irritation:
  - manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
Irreversible eye damage (test based on one rabbit)
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Not irritant
- d) respiratory or skin sensitisation:
  - manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
Skin: Not classified as a sensitizer

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- Respiratory system: N.A.
- Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Skin: Not sensitizing.  
Respiratory system: N.A.
- e) germ cell mutagenicity:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
not mutagenic
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
not classified as mutagenic
- f) carcinogenicity:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
not classified as cancerogenic
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
not carcinogenic
- g) reproductive toxicity:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
not classified
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
not classified
- h) STOT-single exposure:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
not classified
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
not classified
- i) STOT-repeated exposure:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
STOT RE 2 May cause damage to the brain through prolonged or repeated exposure by inhalation.
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
not classified
- j) aspiration hazard:
- manganese sulphate Index number: 025-003-00-4, CAS: 7785-87-7, EC: 232-089-9  
STOT RE 2 May cause damage to the brain through prolonged or repeated exposure by inhalation.
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Not applicable

Inhalation:

Possible irritation of respiratory tract

Skin:

Possible irritation according to the contact time with the product

Eye:

Causes serious eye irritation

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Ingestion:

Possible irritation of mouth and digestive tract.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

The product contain phosphates; Environmental releases can causes serious adverse effects on the environment ,as nitrate pollution of surface water layers and internal eutrophication in surface waters

- manganese sulphate - Index: 025-003-00-4, CAS: 7785-87-7, EC No: 232-089-9  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic compartment	Results	Substance	Reference
Short-term toxicity: <i>Oncorhynchus mykiss</i> Fresh water	LC50 (96 h): 14.5 mg/L Mn	Test material Manganese sulphate monohydrate	Davies PH (1980)
Long-term toxicity: <i>Oncorhynchus mykiss</i> , fresh water	NOEC (4 mo): 0.6 mg/L Mn	Test material (EC name): manganese sulphate	Davies P & Brinkman S (1994)
Short-term toxicity: <i>Daphnia magna</i> , fresh water	LC50 (48 h): 9.8 mg/L dissolved (meas. (arithm. mean)) based on: as Mn <sup>2+</sup>	Test material (EC name): manganese chloride	Biesinger KE & Christensen GM (1972)
Long-term toxicity: <i>Daphnia magna</i> , salt water	LC50 (3 settimane): 5700 µg/L dissolved (meas. (arithm. mean)) based on: mortality	Test material (EC name): manganese chloride	Biesinger KE & Christensen GM (1972)
Algae: <i>Desmodesmus subspicatus</i> (algae, Growth Inhibition Test), fresh water	EC50 (72 h): 61 mg/L test mat. (nominal) based on: growth rate	Test material manganese sulphate monohydrate	Vryenhoef H (2010)

- Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Conclusion on the environmental classification and labelling: the product is not hazardous to the aquatic environment as:  
The lowest acute reference values for fish, invertebrates and algae are > 100 mg Mo/l  
The lowest aquatic NOEC for these three trophic levels is > 1 mg Mo/l (i.e., 43. 2 mg Mo/l for the rainbow trout)

### 12.2. Persistence and degradability

- Manganese sulphate - Index: 025-003-00-4, CAS: 7785-87-7, EC No: 232-089-9  
Not pertinent



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- Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Not pertinent
- 12.3. Bioaccumulative potential
  - Manganese sulphate - Index: 025-003-00-4, CAS: 7785-87-7, EC No: 232-089-9  
No bioaccumulative potential
  - Sodium molybdate CAS: 10102-40-6, EC: 231-551-7  
Biomagnification is not significant in the terrestrial foodchain.
- 12.4. Mobility in soil  
The product is 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

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### **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.  
Contact local authorities who will provide guidance regarding the disposal of special waste.
  - Packaging: Dispose according to current regulations

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### **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.

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### **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)

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Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 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)

N.A.

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.

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## **SECTION 16: Other information**

This document is outside the scope of Article 31 of REACH

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.

N.A. no data available

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.

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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.