



## Safety Data Sheet HYDROFERT 13.40.13

Safety Data Sheet dated 22/7/2015, version 1.1

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

1.1. Product identifier

Trade name:

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

Recommended use:

Fertiliser in powder. Agricultural use.

1.3. Details of the supplier of the safety data sheet

Company:

Biolchim spa - via San Carlo 2130 40059 Medicina (BO)

Biolchim spa - tel +39 051 6971811

Competent person responsible for the safety data sheet:

biolchim@biolchim.it

1.4. Emergency telephone number

### SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols:

None.

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:

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 EEC directive 67/548 and CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 25% - < 30%	potassium nitrate	CAS: 7757-79-1 EC: 231-818-8	 2.14/3 Ox. Sol. 3 H272 O; R8; substance with a

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		REACH No.: 01-2119488224-35	Community workplace exposure limit
>= 1% - < 3%	ammonium nitrate	CAS: 6484-52-2 EC: 229-347-8 REACH No.: 01-2119490981-27	 2.14/3 Ox. Sol. 3 H272  3.3/2 Eye Irrit. 2 H319 O,Xi; R36-8

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

Contact with skin:

Wash with plenty of water and soap.

Contact with eyes:

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

Swallowing:

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

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

Treatment:

None

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Recommended extinguishers:

Water, CO<sub>2</sub>, Foam, Chemical powders, according to the materials involved in the fire. 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.

Burning produces heavy smoke.

#### 5.3. Advice for firefighters

Use suitable breathing apparatus .

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.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

#### 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

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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.  
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.
- 7.3. Specific end use(s)  
None in particular

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## **SECTION 8: Exposure controls/personal protection**

- 8.1. Control parameters  
potassium nitrate - CAS: 7757-79-1  
TLV TWA - 10 mg/m<sup>3</sup> (IOELV) - 15 mg/m<sup>3</sup> (ACGIH)  
TLV STEL - 3 mg/m<sup>3</sup> (IOELV) - 5 mg/m<sup>3</sup> (ACGIH) respirable fr.
- DNEL Exposure Limit Values  
potassium nitrate - CAS: 7757-79-1  
Worker Industry: 36.7 mg/m<sup>3</sup> - Worker Professional: 36.7 mg/m<sup>3</sup> - Consumer: 10.9 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 20.8 mg/kg body mass/day - Worker Professional: 20.8 mg/kg body mass/day - Consumer: 12.5 mg/kg body mass/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Consumer: 12.5 mg/kg body mass/day - Exposure: Human Oral - Frequency: Long Term, systemic effects
- ammonium nitrate - CAS: 6484-52-2  
Worker Industry: 21.3 mg/kg body mass/day - Worker Professional: 21.3 mg/kg body mass/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 37.6 mg/m<sup>3</sup> - Worker Professional: 37.6 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
- PNEC Exposure Limit Values  
potassium nitrate - CAS: 7757-79-1  
Target: Fresh Water - Value: 0.45 mg/l  
Target: Marine water - Value: 0.045 mg/l  
Target: Intermittent release - Value: 4.5 mg/l  
Target: STP - Value: 18 mg/l
- ammonium nitrate - CAS: 6484-52-2  
Target: Fresh Water - Value: 0.45 mg/l  
Target: Marine water - Value: 0.045 mg/l  
Target: Intermittent release - Value: 4.5 mg/l
- 8.2. Exposure controls
- Eye protection:  
Not needed for normal use. Anyway, operate according good working practices.
- Protection for skin:  
No special precaution must be adopted for normal use.
- Protection for hands:  
Not needed for normal use.
- Respiratory protection:  
Not needed for normal use.
- Thermal Hazards:  
None



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Environmental exposure controls:

None

Appropriate engineering controls:

None

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### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour:	Solid, white
Odour:	Odourless
Odour threshold:	Not Relevant
pH:	4.7 (sol.1%; 20°C)
Melting point / freezing point:	Not Relevant
Initial boiling point and boiling range:	Not Relevant
Solid/gas flammability:	Not Relevant
Upper/lower flammability or explosive limits:	Not Relevant
Vapour density:	Not Relevant
Flash point:	Not Relevant
Evaporation rate:	Not Relevant
Vapour pressure:	Not Relevant
Relative density:	Not Relevant
Solubility in water:	Soluble
Solubility in oil:	Not Relevant
Partition coefficient (n-octanol/water):	Not Relevant
Auto-ignition temperature:	Not Relevant
Decomposition temperature:	Not Relevant
Viscosity:	Not Relevant
Explosive properties:	Not Relevant
Oxidizing properties:	Not Relevant

9.2. Other information

Miscibility:	Not Relevant
Fat Solubility:	Not Relevant
Conductivity:	8,9 mS/cm (Sol. 1% - 25°C)
Substance Groups relevant properties	Not Relevant

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### SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

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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:

potassium nitrate - CAS: 7757-79-1

a) acute toxicity:

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- Test: Acute toxicity LD50 - Route: Cutaneous - Species: Rat > 5000 mg/kg  
Test: Acute toxicity LD50 - Route: Oral - Species: Rat > 2000 mg/kg
- b) skin corrosion/irritation:  
Test: Skin Irritant Negative
- c) serious eye damage/irritation:  
Test: Eye Irritant Negative
- d) respiratory or skin sensitisation:  
Test: Skin Sensitization Negative  
Test: Acute toxicity LC50 - Route: Inhalation - Species: Rat > 527 mg/m<sup>3</sup>
- e) germ cell mutagenicity:  
Test: Mutagenicity - Species: Mammals (Animal) Cell: Germs Negative
- f) carcinogenicity:  
Test: Carcinogenicity Negative
- ammonium nitrate - CAS: 6484-52-2
- a) acute toxicity:  
Test: Acute toxicity LD50 - Route: Oral - Species: Rat = 2950 mg/kg  
Test: Acute toxicity LD50 - Route: Cutaneous - Species: Rat > 5000 mg/kg

If not differently specified, the information required in Regulation 453/2010/EC 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.

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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.

potassium nitrate - CAS: 7757-79-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae > 1700 mg/l - Duration h: 10 d

Endpoint: EC50 - Species: Daphnia = 490 mg/l - Duration h: 48 h

Endpoint: LC50 - Species: Fish = 1378 mg/l - Duration h: 96 h

ammonium nitrate - CAS: 6484-52-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 447 mg/l - Duration h: 48 h

Endpoint: EC50 - Species: Daphnia = 490 mg/l - Duration h: 48 h

### 12.2. Persistence and degradability

None

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

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## SECTION 13: Disposal considerations



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### 13.1. Waste treatment methods

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

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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

N.A.

### 14.6. Special precautions for user

N.A.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No

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## SECTION 15: Regulatory information

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

Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)

Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Dir. 2006/8/EC

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) n. 453/2010 (Annex I)

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:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

Restriction 30

Restriction 58

Where applicable, refer to the following regulatory provisions :

Directive 2003/105/CE ('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

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## SECTION 16: Other information



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Full text of phrases referred to in Section 3:

R36 Irritating to eyes.

R8 Contact with combustible material may cause fire.

H272 May intensify fire; oxidiser.

H319 Causes serious eye irritation.

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

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.

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.
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.