



Material Safety Data Sheet
in accordance with 1907/2006/EC,
Article 31

Version: 1.0

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Print date: 20.07.2012

Revision date: Initial version

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

Product identifier

Trade name: GoldLabel-nutrients-HYDRO-A
Synonym(s): SUBSTRATE-A recipe

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

Use: Liquid plant nutrient.
Product category: Product Category 12 (PC12 Fertilizers),
Sector of Use 21 (SU21 Consumer uses).

Details of the supplier of the safety data sheet

Manufacturer/supplier: Special Mix B.V.
J.P. Poelstraat 1
1483 GC De Rijp
The Netherlands
Tel.: +31 (0) 299 675 711
Fax: +31 (0) 299 671 393
Email: info@goldlabel.nl
Website: www.goldlabel.nl

Further information obtainable from:

Contact person: Hendrik Jongkind
Tel.: +31 (0) 299 671 393
Email: info@goldlabel.nl
Working hours (business days): 09:00-17:00

Emergency telephone number:

The Netherlands:	National Poison Information Centre:	+31 (0) 30 247 88 88
Belgium:	Belgian Poison Centre:	+32 (0) 70 245 245
United Kingdom:	UWIC:	+44 (0) 29 204 16388

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification in accordance with Regulation (EC) no 1272/2008

Acute Tox. 4	H302
Skin Sens. 1	H317
Eye Dam. 1	H318

Label elements and precautionary statement

Hazard pictograms:



Signal word: Danger.

Hazard statements:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Precautions:

P102	Keep out of reach of children.
P270	Do not eat, drink or smoke when using this product.



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P280
P301 + P312
P305 + P351 + P338
P337 + P313

Wear protective gloves/protective clothing/eye protection.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Classification in accordance with Directive 67/548/EEC or Directive 1999/45/EC
Xn; R22 - Xi; R41 - R43

Label elements
Hazard symbols:



Classification of the labelling:

Xn Harmful.
Risk phrase(s):
R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.

Safety advice:
S2 Keep out of the reach of children.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 Wear suitable gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.

Hazard-determining components for labelling: Nitric acid, ammonium calcium salt, calcium nitrate, Fe-EDDHMA.

Other hazards
Void.

Results of PBT and vPvB assessment
PBT: No.
vPvB: No.

SECTION 3: Composition/information on ingredients

Chemical characterization:
Description:

Mixture.
Preparation based on i.a. nitric acid, ammonium calcium salt, calcium nitrate, calcium chloride, potassium nitrate, Fe-EDDHMA, nitric acid and ammonium nitrate.

Hazardous ingredients

Nitric acid, ammonium calcium salt
CAS#: 15245-12-2
EC#: 239-289-5



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Trade name: GoldLabel-nutrients-HYDRO-A

Index#: -
REACH reg.#: -
Content (W/W): 20 - 50 %
Danger:
1999/45/EC: Xn; R22 - Xi; R41.
1272/2008/EC: Acute Tox. 4; H302 - Eye Dam. 1; H318.

Calcium nitrate

CAS#: 10124-37-5
EC#: 233-332-1
Index#: -
REACH reg.#: -
Content (W/W): 10 - 30 %
Danger:
1999/45/EC: O; R8 - Xn; R22 - Xi; R41.
1272/2008/EC: Ox. Sol. 2; H272 - Acute Tox. 4; H302 - Eye Dam. 1; H318.

Calcium chloride

CAS#: 10043-52-4
EC#: 233-140-8
Index#: 017-013-00-2
REACH reg.#: 01-2119494219-28
Content (W/W): 3 - 10 %
Danger:
1999/45/EC: Xi; R36.
1272/2008/EC: Eye Irrit. 2; H319.

Potassium nitrate

CAS#: 7757-79-1
EC#: 231-818-8
Index#: -
REACH reg.#: 01-2119488224-35
Content (W/W): 5 - 10 %
Danger:
1999/45/EC: O; R8.
1272/2008/EC: Ox. Sol. 3; H272.

Ferrate(1-), [[α,α' -[1,2-ethanediyldi(imino- κ N)]bis[2-(hydroxy- κ O)-4-methylbenzeneacetato- κ O]](4-)]-, potassium

Synonym: Fe-EDDHMA
CAS#: 178667-57-7
EC#: -
Index#: -
REACH reg.#: -
Content (W/W): 1 - 5 %
Danger:
1999/45/EC: R43.
1272/2008/EC: Skin Sens. 1; H317.

Nitric acid 38 %

CAS#: 7697-37-2
EC#: 231-714-2
Index#: 007-004-00-1
REACH reg.#: -
Content (W/W): 0.5 - 2 %
Danger (100% material):
1999/45/EC: O; R8 - C; R35.
1272/2008/EC: Ox. Liq. 3; H272 - Skin Corr. 1A; H314.

Ammonium nitrate



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Trade name: GoldLabel-nutrients-HYDRO-A

CAS#: 6484-52-2
EC#: 229-347-8
Index#: -
REACH reg.#: -
Content (W/W): 0.5 - 2 %
Danger:
1999/45/EC: O; R8 - Xi; R36.
1272/2008/EC: Ox. Sol. 3; H272 - Eye Irrit. 2; H319.

Full text of R-, H- and EUH-phrase(s): see section 16.

SECTION 4: First aid measures

Description of first aid measures

General information:

Remove victim from danger zone and place in lying position.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Remove immediately all contaminated clothing.

Material attacks the skin tissue - immediate rinsing after exposure can limit the damage.

Inhalation:

Remove to fresh air.

If the victim is not breathing, apply artificial respiration.

Skin contact:

Remove contaminated clothing.

Wash immediately with plenty of water and soap.

In case of skin irritation or rash: Get medical advice/attention.

Eye contact:

Remove contact lenses, if present, and immediately rinse eyes while holding eyelids open for a sufficient period of time (at least 15 minutes) with lukewarm water.

Help the victim with the rinsing process.

Then immediately consult a physician/ophthalmologist.

Ingestion:

Rinse mouth immediately with water (if conscious), and then drink plenty of water. Do not induce vomiting. If the person feels unwell consult a physician or take victim to hospital (show packaging, label or SDS to physician). If the person needs to vomit, keep their head low to prevent vomit from entering the lungs. Place unconscious person on the side in the recovery position. Loosen tight clothing such as a shirt collar, tie, belt or waistband. Rest.

Most important symptoms and effects, both acute and delayed

Inhalation:

Exposure to vapour concentrations of component dusts higher than the MAC value can be harmful to the health.

Potential health effects include: burning sensation, coughing, difficulty breathing, loss of consciousness. Effects may be delayed. Prolonged Inhalation of aerosol and/or mist may cause pneumonia and/or lung oedema, but only after initial corrosive effects on the mucous membranes of the eyes and/or upper airways have become manifest.

Skin contact:

Slightly irritating to the skin. Signs and symptoms of skin irritation may include redness and a yellow discolouration.

Eye contact:

May cause irreversible damage to the eyes. Redness. Pain.

Ingestion:

Irritation to mouth, throat and stomach. Abdominal cramp, nausea, blue skin, feeling of weakness. Contains calcium nitrate which, after ingestion, may cause blood damage (methemoglobinemia).

Indication of any immediate medical attention and special treatment needed

Symptomatic treatment and supportive therapy as prescribed.



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SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

CO₂, extinguishing powder or water jet. Fight larger fires with water spray.
Foam.
Sand.

Adapt extinguishing measures to suit the environment.

Unsuitable extinguishing media for safety reasons:

Powerful water jet.

Special hazards arising from the substance or mixture

During heating or in case of fire, poisonous gases may be produced.

May be released in event of fire:

Nitrogen oxides (NO_x).

Metal oxide(s).

Advice for firefighters

Special protective clothing:

Wear self-contained breathing apparatus.

Other information

No specific requirements.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure sufficient ventilation.

Wear personal protective equipment.

Environmental precautions

Do not allow large quantities of product to reach sewage/surface water/groundwater in concentrated form.

Notify competent authorities in case of release of large quantities into the environment.

Methods and material for containment and cleaning up

Soak up immediately with absorbent material (sand, dry earth).

Recycle, if possible.

Collect in suitable containers for disposal.

Then flush away residue with plenty of water.

Reference to other sections

Information regarding safe handling – see section 7.

Information regarding personal protective equipment – see section 8.

Information regarding disposal – see section 13.

SECTION 7: Handling and storage

Precautions for safe handling:



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Handling:

Open and handle package with care.
Wear suitable protective clothing.
Ventilation is recommended.
Do not smoke, eat or drink during use.

Information about fire - and explosion protection:

No specific requirements.

Conditions for safe storage, including any incompatibilities

Storage:

Close containers after each use.
Handle empty containers as if they were full.
Do not reuse packaging.

Requirements to be met by storerooms and receptacles:

Preferably keep in the original packaging.
Keep in a dark place.

Store in a frost-free environment.

Protect against heat and direct sunlight.

Suitable packaging material: Original packaging, polyethylene.

Suitable material for tanks and pipelines: Stainless steel, PVC.

Information about storage in one common storage facility:

Install partitions in the drip tray to prevent acidic and alkaline fertilisers from coming into contact with one another.

Further information about storage conditions:

Recommended storage temperature 5 - 35 °C.

Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace:

Product information: 7757-79-1	Potassium nitrate		
TWA 8 h	mg/m ³ (ppm)	5 (-)	inhalable dust

Product information: 7697-37-2	Nitric acid		
TWA 15 min.	mg/m ³ (ppm)	2.6 (1)	2006/15/EC

Dangerous ingredients with DN(M)EL:

Product information: 15245-12-2 Nitric acid, ammonium calcium salt	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Long-term dermal	13.9	mg/kg bw/day	Workers Systemic
DN(M)EL	Long-term inhalation	98	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population



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				Local
DN(M)EL	Short-term inhalation	-	mg/m ³	General population Local
DN(M)EL	Long-term dermal	8.33	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term inhalation	25.2	mg/m ³	General population Systemic
DN(M)EL	Long-term oral	8.33	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Long-term inhalation	-	mg/m ³	General population Local

Dangerous ingredients with DN(M)EL:

Product information: 10124-37-5 Calcium nitrate	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Long-term dermal	13.9	mg/kg bw/day	Workers Systemic
DN(M)EL	Long-term inhalation	24.5	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Short-term inhalation	-	mg/m ³	General population Local
DN(M)EL	Long-term dermal	8.33	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term inhalation	6.3	mg/m ³	General population Systemic
DN(M)EL	Long-term oral	8.33	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Long-term inhalation	-	mg/m ³	General population Local

Dangerous ingredients with DN(M)EL:



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Product information: 10043-52-4 Calcium chloride	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	10	mg/m ³	Workers Local
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Systemic
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	5	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Short-term inhalation	5	mg/m ³	General population Local
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term inhalation	2.5	mg/m ³	General population Systemic
DN(M)EL	Long-term oral	-	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Long-term inhalation	-	mg/m ³	General population Local

Dangerous ingredients with DN(M)EL:				
Product information: 7757-79-1 Potassium nitrate	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Long-term dermal	20.8	mg/kg bw/day	Workers Systemic
DN(M)EL	Long-term inhalation	36.7	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Short-term inhalation	-	mg/m ³	General population Local
DN(M)EL	Long-term dermal	12.5	mg/kg bw/day	General population



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DN(M)EL	Long-term inhalation	10.9	mg/m ³	Systemic General population
DN(M)EL	Long-term oral	12.5	mg/kg bw/day	Systemic General population
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Local General population
DN(M)EL	Long-term inhalation	-	mg/m ³	Local General population

Dangerous ingredients with DN(M)EL:

Product information: 7697-37-2 Nitric acid	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	2.6	mg/m ³	Workers Local
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Systemic
DN(M)EL	Long-term inhalation	1.3	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Short-term inhalation	1.3	mg/m ³	General population Local
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term inhalation	-	mg/m ³	General population Systemic
DN(M)EL	Long-term oral	-	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Long-term inhalation	0.65	mg/m ³	General population Local

Dangerous ingredients with DN(M)EL:

Product information: 6484-52-2 Ammonium nitrate	Exposure	Value	Unit	Population / Effects
DN(M)EL	Short-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Short-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Long-term	21.3	mg/kg bw/day	Workers



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	dermal			Systemic
DN(M)EL	Long-term inhalation	37.6	mg/m ³	Workers Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	Workers Local
DN(M)EL	Long-term inhalation	-	mg/m ³	Workers Local
DN(M)EL	Short-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Short-term inhalation	-	mg/m ³	General population Local
DN(M)EL	Long-term dermal	12.8	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term inhalation	11.1	mg/m ³	General population Systemic
DN(M)EL	Long-term oral	12.8	mg/kg bw/day	General population Systemic
DN(M)EL	Long-term dermal	-	mg/kg bw/day	General population Local
DN(M)EL	Long-term inhalation	-	mg/m ³	General population Local

Dangerous ingredients with PNEC:

Product information: 15245-12-2 Nitric acid, ammonium calcium salt	Value	Unit	Compartment
PNEC	0.45	mg/l	Fresh water
PNEC	0.045	mg/l	Marine water
PNEC	4.5	mg/l	Intermittent releases
PNEC	18	mg/l	STP (sewage treatment plant)
PNEC	-	mg/kg dwt	Sediment fresh water
PNEC	-	mg/kg dwt	Sediment marine water
PNEC	-	mg/kg wwt	Soil
PNEC	No bio-accumulation potential	mg/l	Oral (foodstuffs)

Dangerous ingredients with PNEC:

Product information: 10124-37-5 Calcium nitrate	Value	Unit	Compartment
PNEC	0.45	mg/l	Fresh water
PNEC	0.045	mg/l	Marine water
PNEC	4.5	mg/l	Intermittent releases
PNEC	18	mg/l	STP (sewage treatment plant)
PNEC	-	mg/kg dwt	Sediment fresh water
PNEC	-	mg/kg dwt	Sediment marine water
PNEC	-	mg/kg wwt	Soil
PNEC	No bio-accumulation potential	mg/l	Oral (foodstuffs)

Dangerous ingredients with PNEC:

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Product information: 7757-79-1 Potassium nitrate	Value	Unit	Compartment
PNEC	0.45	mg/l	Fresh water
PNEC	0.045	mg/l	Marine water
PNEC	4.5	mg/l	Intermittent releases
PNEC	18	mg/l	STP (sewage treatment plant)
PNEC	-	mg/kg dwt	Sediment fresh water
PNEC	-	mg/kg dwt	Sediment marine water
PNEC	-	mg/kg wwt	Soil
PNEC	No bio-accumulation potential	mg/l	Oral

Dangerous ingredients with PNEC:			
Product information: 6484-52-2 Ammonium nitrate	Value	Unit	Compartment
PNEC	0.45	mg/l	Fresh water
PNEC	0.045	mg/l	Marine water
PNEC	4.5	mg/l	Intermittent releases
PNEC	18	mg/l	STP (sewage treatment plant)
PNEC	-	mg/kg dwt	Sediment fresh water
PNEC	-	mg/kg dwt	Sediment marine water
PNEC	-	mg/kg wwt	Soil
PNEC	No bio-accumulation potential	mg/l	Oral

Exposure controls

Personal protective equipment:

Remove immediately all contaminated clothing.
Store protective clothing separately.
Avoid contact with the eyes.
Wash hands thoroughly after handling this product.

General protective and hygienic measures:

Keep away from foodstuffs and beverages.
Do not eat, drink or smoke when using this product.
The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

No specific requirements, normal room ventilation will suffice.

Hand protection:

Safety gloves.

The glove material (EN374) has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time can be obtained from the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tight fitting safety goggles. Eye shower.



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Body protection:

Wear suitable protective work clothing (in case of splash risk).

Measuring procedures:

In order to establish compliance with an exposure limit and to establish that exposure is properly controlled, it may be necessary to determine the concentration of the substances in the inhalation zone or in the general workspace.

Environmental exposure controls:

Leakage of the material and concentrated solution must be stopped. Leakage of large quantities into sewage, surface waters and groundwater must be avoided because the material contains calcium nitrate which may lead to eutrophication.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

General information

Appearance

Form:	Liquid.
Colour:	Auburn.
Odour:	Odourless.
Odour threshold:	Not determined.
pH-value:	Not determined.

Change in condition

Melting point/melting range:	Not determined.
Boiling point/boiling range:	Not determined.
Flash point:	> 93 °C.

Flammability

(solid, gas):	Not applicable.
Auto-ignition:	Not determined.
Explosion hazard:	Not determined.

Explosive limits

Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not determined.

Relative density: Approx. 1.25 (water = 1).

Vapour density: Not determined.

Evaporation rate: Not determined.

Solubility in/miscibility with water: Fully.

Partition coefficient (n-octanol/water): Not determined.

Viscosity

Dynamic:	6 cP.
Kinematic:	Not determined.

Other information No further relevant information available.

SECTION 10: Stability and reactivity

Reactivity

Chemical stability:

The product is stable if stored and handled as prescribed.



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Thermal decomposition/Conditions to be avoided:

No decomposition if used as prescribed. Avoid storing at high temperatures (> 35 °C) to prevent degradation of the material or pressure build-up. Avoid low temperatures (< 5 °C) to prevent crystallization. Material is susceptible to frost.

Possibility of hazardous reactions

Contact with strong reducing agents (and bases).

Conditions to avoid

Avoid heat, sparks, open flames, and other sources of ignition. Prevent evaporation in a non-ventilated environment. Protect against heat and direct sunlight. Protect against frost.

Incompatible materials

Reducing agents, strong acids and bases, metal powders, combustible materials, chromates, zinc, copper and copper alloys, chlorates. Mildly corrosive for metals.

Hazardous decomposition products

No hazardous decomposition products are formed if stored under normal conditions. In case of heating or fire, irritating or toxic vapours such as nitrogen oxides may be released.

SECTION 11: Toxicological information

Toxicology information

Acute toxicity from the components.

LD/LC50 values relevant for classification:

Product information: 15245-12-2	Nitric acid, ammonium calcium salt	
Oral	LD50	500 mg/kg (rat) (OECD 423)
Inhalation	LC50 (4 h)	-
Dermal	LD50	> 2000 mg/kg (rat) (OECD 402)
Product information: 10124-37-5	Calcium nitrate	
Oral	LD50	1,000 mg/kg (rat) (OECD 423)
Inhalation	LC50	-
Dermal	LD50	> 2000 mg/kg (rat) (OECD 402)
Product information: 10043-52-4	Calcium chloride	
Oral	LD50	2120 mg/kg (rat, female) (OECD 401)
Inhalation	LC50 (4 h)	> 160 mg/l (rat)
Dermal	LD50	> 5000 mg/kg (rat) (OECD 402)
Product information: 7757-79-1	Potassium nitrate	
Oral	LD50	> 2000 mg/kg (rat) (OECD 425) 3750 mg/kg (rat) 1901 mg/kg (rabbit)
Inhalation	LC50 (4 h)	0.527 mg/l (rat) (OECD 403, inhalable dust)
Dermal	LD50	> 5000 mg/kg (rat) (OECD 402)
Product information: 7697-37-2	Nitric acid	
Oral	LD50	430 mg/kg (human)
Inhalation	LC50 (4 h)	> 80 mg/l (rat) (OECD 403)
Dermal	LD50	-
Product information: 6484-52-2	Ammonium nitrate	



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Oral	LD50	2950 mg/kg (rat) (OECD 401)
Inhalation	LC50 (4 h)	> 88.8 mg/l (rat) (OECD 403)
Dermal	LD50	> 5000 mg/kg (rat) (OECD 402)

The following health risk assessment is based on an assessment of the various ingredients in the product.

Primary irritant effect:

on the skin:

Irritates the skin and the mucous membranes.

to the eye:

Irritant / corrosive effect.

Germ cell mutagenicity:

Not classified.

Reproductive and developmental toxicity:

Not classified.

Sensitisation:

Contains ferrate(1-), [[α,α' -[1,2-ethanediyl-di(imino- κ N)]bis[2-(hydroxy- κ O)-4-methylbenzeneacetato- κ O]](4-)-], potassium which is classified as sensitizing.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Not classified.

Other information:

No further relevant information available.

SECTION 12: Ecological information

Toxicology information

Ecotoxicity from the components.

Aquatic toxicity:

Product information: 15245-12-2	Nitric acid, ammonium calcium salt	
Fish	LC50 (48 h)	447 mg/l (cyprinus carpio)
Water flea	EC50 (48 h)	> 100 mg/l (daphnia magna) (OECD 202)
Algae	EC50 (72 h)	> 100 mg/l (pseudokirchnerella subcapitata) (OECD 201)
Bacteria	EC50	> 1000 mg/l (activated sludge) (OECD 209)

Product information: 10124-37-5	Calcium nitrate	
Fish	LC50 (96 h)	> 98.9 mg/l (OECD 203)
Water flea	EC50	490 mg/l (daphnia magna)
Algae	EC50	-
Bacteria	EC50	-

Product information: 10043-52-4	Calcium chloride	
Fish	LC50 (96 h)	4630 mg/l (EPA/600/4-90/027, EPA/600/6-91/003)
Water flea	EC50 (48 h)	490 mg/l (daphnia magna)
Algae	EC50	> 4000 mg/l (pseudokirchnerella subcapitata) (OECD 201)
Bacteria	EC50	-

Product information: 7757-79-1	Potassium nitrate	
Fish	LC50 (96 h)	> 98.9 mg/l (OECD 203) 180 - 200 mg/l (poecilia reticulata)
Water flea	EC50 (48 h)	2400 mg/l (daphnia magna) (OECD 202)



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Algae	EC50	-
Bacteria	EC50	-

Product information: 7697-37-2	Nitric acid	
Fish	LC100 (96 h)	3 - 3.5 mg/l (bluegill sunfish)
	LC50 (96 h)	> 100 mg/l
Water flea	EC50 (96 h)	490 mg/l (daphnia magna)
	EC50 (48 h)	180 mg/l (daphnia magna)
Algae	EC50	-
Bacteria	EC50	-

Product information: 6484-52-2	Ammonium nitrate	
Fish	LC50 (48 h)	447 mg/l (95% CI 391-513)
Water flea	EC50	-
Algae	EC50	-
Bacteria	EC50	-

The following ecological risk assessment is based on an assessment of the various ingredients in the product.

Persistence and degradability

Partly inorganic and probably largely biodegradable over time.

Behaviour in environmental compartments

Bioaccumulative potential:

Bioaccumulation in organisms is not expected.

Mobility in soil:

No further relevant information available.

Further ecological information

General information:

Water hazard class 1 (German regulation) (Self-assessment): slightly hazardous to water. Do not discharge undiluted product into groundwater, surface water or sewage system.

Results of PBT and vPvB assessment

The mixture does not meet all of the assessment criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

Other adverse effects

Contains substances that contribute to eutrophication: Nitrates.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendation:

May be brought to a supervised incineration plant in compliance with local regulations.

EC Regulation for Disposal of Waste (EWC):

06 10 02* WASTES FROM INORGANIC CHEMICAL PROCESSES, wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture; waste containing dangerous substances.

Uncleaned packaging

Recommendation:

Disposal must be made according to official regulations. Empty the packaging with care. Do not contaminate soil, water or environment with the waste container. Comply with local regulations with regard to the recovery or disposal



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of waste.

SECTION 14: Transport information

Land transport ADR/RID (cross-border)

ADR/GGVSEB class: Not a dangerous good according to the transport regulations.
Hazard identification number: -
UN number: -
Packing group: -
Label: -
Special marking: -
UN proper shipping name: -
Tunnel restriction code: -

Inland shipping ADN/ADR

ADN/R-class: -
UN number: -
Subsidiary risk
Environmental hazards: -
CMR properties: -
Buoyancy: -

Maritime transport IMDG

IMDG-class: -
UN number: -
Label: -
Packing group: -
EMS number: -
Marine pollutant: -
Proper shipping name: -

Air transport ICAO-TI and IATA-DGR

ICAO/IATA class: -
UN number: -
Label: -
Packing group: -
Proper shipping name: -

Environmental hazards

No.

Special precautions for user

None.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No further relevant information available.

SECTION 15: Regulatory information

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

National regulations:



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EU regulations and directives which affect this mixture (not yet directly or indirectly mentioned):

Directive 94/33/EC	Protection of young people at work.
Directive 89/686/EEC	Personal protective equipment.
Directive 98/24/EC	Risks related to chemical agents at work.
Regulation 2003/2003/EC	Concerning fertilisers. The material is an EC FERTILIZER classified as type NK fertilizer, liquid - nitrogen (N) + potassium (K) + calcium oxide (CaO) - fertilizer, NK: 4-2 + 5 CaO.

Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

This information is based on the current state of our knowledge. It should not be construed as any guarantee of product characteristics, nor does it establish a legally valid contractual relationship.

List of relevant R-, H- and EUH-phrases from sections 2 and 3

R8	Contact with combustible material may cause fire.
R22	Harmful if swallowed.
R35	Causes severe burns.
R36	Irritating to eyes.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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Abbreviations and acronyms:

ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
IATA-DGR:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO:	International Civil Aviation Organization
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
P:	Marine Pollutant
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
EC50:	Half maximal effective concentration
LC50:	Lethal concentration, 50 percent
LD50:	Lethal dose, 50 percent
OEL:	Occupational Exposure Limit
NOEC:	No Observed Effect Concentration
vPvB:	Very Persistent and Very Bioaccumulative
PBT:	Persistent, Bioaccumulative and Toxic substance
EWC:	European Waste Catalogue
TWA:	Time-Weighted Average, limit value pertaining to the MAC value
DNEL:	Derived No-Effect Level
DMEL:	Derived Minimal Effect Level



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PNEC:	Predicted No-Effect Concentration
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