

H318 Causes serious eye damage
H412 Harmful to aquatic life with long lasting effects

Precautionary Statements:

P270 Do not eat, drink or smoke when using this product
 P280 Wear eye protection
 P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 If eye irritation persists: Get medical advice/attention
 P501 Dispose of contents in accordance with local regulations, dispose of container to appropriate domestic recycling stream

2.3. Other hazards This product has not been tested for PBT or vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC Classification No 1272/2008

Hazardous ingredient(s)	%w/w	CAS no	EC no	REACH Registration no	H statements
Calcium nitrate dihydrate	10 – 30	13477-34-4	233-332-1	01-2119463277-33-####	H272, H302, H318
Zinc nitrate hexahydrate	1 – 5	10196-18-6	231-943-8	01-2119488498-16-####	H272, H302, H315, H319, H335, H400, H411

SECTION 4: First aid measures

4.1. Description of first aid measures

4.1.1. First aid instructions.

If inhaled: Move person into fresh air, rest and seek medical advice

If on skin (or hair): Wash affected skin with plenty of soap and water. Wash clothes before reuse

If in eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open. Remove contact lenses if possible. Seek medical advice

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth and throat. Do not induce vomiting. Drink 1-2 glasses of water. Consult a physician

Other first aid advice: If vomiting occurs spontaneously, keep airways clear. Give more water when vomiting stops

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

If inhaled:	Inhalation of mist or vapours may cause irritation and a burning sensation to mucous membranes and upper respiratory tract. Symptoms may include irritation, coughing and tightness of breath
If on skin (or hair):	Where not washed exposure may result in redness and irritation. Irritation may occur to skin especially when already sore or dry according to contact time.
If in eyes:	Exposure to eyes will result in immediate pain and tearing. Burns and potentially serious damage to the eye may occur if not washed promptly
If swallowed:	Ingestion may cause abdominal pain, vomiting and diarrhoea. Large doses of calcium nitrate can cause renal stones, hypercalcemia, metabolic alkalosis and methemoglobinemia

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

Medical treatment:	Treatment for hypercalcemia and methemoglobinemia may be required after ingestion of this product
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	All extinguishing agents permitted
Unsuitable extinguishing media:	None known

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:	Oxides of calcium, magnesium, zinc, boron, carbon, nitrogen and sodium
Other special hazards during fire:	None known

5.3. Advice for firefighters

Protective actions during firefighting:	Wear self-containing breathing apparatus
Special protective equipment for firefighters:	No special instructions
Other advice:	Not applicable

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Non-emergency personnel PPE	See section 8.2
Emergency responders PPE	See section 8.2
Controlling risks from accidental release:	Avoid contact with reducing agents
Emergency procedures:	Evacuate personnel to safe areas.

6.2. Environmental precautions

Keep accidental releases away from: Drains, water courses, soil and open ground. Discharge to ground, water courses or drains can cause eutrophication

6.3. Methods and material for containment and cleaning up

Containing a spill: Mop up and contain with absorbent materials

Cleaning up a spill: Mop spills, recycle where possible

Other information on spill handling: Capture with absorbent material. Recycle where possible

6.4. Reference to other sections

References to other sections: See section 8.2 for personal protective equipment. See section 13.1 for disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling recommendations: Wash hands and exposed skin before meals and after use. Wear gloves when handling the product over long periods of time

Handling incompatibles: Do not use with bases or reducing agents

Reducing environmental risk: Do not discharge into drains or water courses

Occupational hygiene advice: Wash hands after using this product and before eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas

7.2. Conditions for safe storage, including any incompatibilities

Safe storage: managing risks during storage:

Explosive atmospheres formed during storage: Not applicable

Corrosive conditions during storage: Not applicable

Flammability hazards during storage: Not applicable

Incompatible substances or mixtures: Incompatible with bases or reducing agents

Evaporative conditions: Not applicable

Potential ignition sources, including electrical equipment: Not applicable

Safe storage: controlling effects of ambient conditions:

Weather conditions: Do not store outside uncontained

Ambient pressure: Not applicable

Temperature: Do not allow product to freeze or exceed 30°C

Sunlight: Keep out of direct sunlight

Humidity: Not applicable

Vibration: Not applicable

Safe storage: maintaining the integrity of the product:

Stabilisers: Stabilisers are not used in this product

Antioxidants: Antioxidants are not used in this product

Safe storage: other advice:

Ventilation requirements for storage: No specific ventilation requirements

Specific designs for storage rooms or vessels: No specific design criteria on storage areas apart from normal regulatory requirements for substances of this type

Quantity limits under storage conditions: Not applicable

Suitable packaging for the substance: Keep in original container. On prolonged exposure may be corrosive to aluminium, copper, carbon steel and stainless steel

7.3. Specific end use(s)

Uses: Use as a specialist concentrate calcium fertiliser for use with vegetables, fruit tree and other crops

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure limits: Not applicable

8.1.2 Biological Limit Values: Not applicable

8.1.3 Current recommended monitoring procedures: Not applicable

8.1.4 Air contaminants formed when using the product as intended: Not applicable

8.1.5. PNECs and DNELs Not applicable

8.2. Exposure controls

8.2.1. Appropriate engineering controls: Handle in accordance with good industrial hygiene

8.2.2. Personal Protection Equipment

Eye protection: Use safety glasses tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Face protection: Not required

Hand protection: When handling the product over an extended period of time use nitrile, latex or rubber gloves, which satisfy the specifications of EU Directive 89/686/EEC and the standard EN 420 derived from it

Other skin protection Do not wear open footwear

Respiratory protection Not required

Thermal hazards Not required

8.2.3. Environmental exposure controls Do not release substance to drains or surface water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Clear amber liquid
Physical state:	Liquid
Colour:	Amber
Odour:	Slightly sweet
Odour threshold:	Data not available
pH:	3.0 – 5.0
Melting point:	Data not available
Freezing point:	<0°C
Initial boiling point:	Aqueous component will boil at 100°C
Boiling range:	Data not available
Flash point:	Data not available
Flash point method:	Data not available
Evaporation rate:	Data not available
Flammability (if solid or gas):	Data not available
Upper and lower flammability or explosive limits:	Data not available
Vapour pressure:	Data not available
Vapour density:	Data not available
Relative density:	1.25 – 1.28 g/cm ³ at 20°C
Solubility(ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	<100 cPs at 20°C
Explosive properties	Data not available
Oxidising properties	Data not available

9.2. Other information Data not available

SECTION 10: Stability and reactivity

- 10.1. Reactivity** Can react with bases and strong reducing agents
- 10.2. Chemical stability** Product is stable under anticipated storage and handling conditions
- 10.3. Possibility of hazardous reactions** Substance not known to react and/or polymerise
- 10.4. Conditions to avoid** Excessive heat (to water boiling point), mixing with alkalis
- 10.5. Incompatible materials** Reducing and alkaline materials
- 10.6. Hazardous decomposition products** No known hazardous decomposition products known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

- Acute toxicity LD50; 300 - 2,000 mg/kg body weight (based on product classification)
- Skin corrosion/irritation May be slightly irritating to the skin
- Serious eye damage/irritation Classified as corrosive to the eyes
- Respiratory or skin sensitisation Data not available
- Germ cell mutagenicity Data not available
- Carcinogenicity Data not available
- Reproductive toxicity Data not available
- STOT-repeated exposure; Data not available

11.2. Other information No other information

SECTION 12: Ecological information

12.1. Toxicity

No specific data available from tests performed on this product. Data below has been extrapolated from constituent components

Species	Test	Value
Rainbow trout (<i>Oncorhynchus mykiss</i>)	LC50 96H	4 mg/L
Water flea (<i>Daphnia magna</i>)	EC50 48H	22 mg/L

12.2. Persistence and degradability Data not available

12.3. Bioaccumulative potential Data not available

12.4. Mobility in soil Data not available

12.5. Results of PBT and vPvB assessment Data not available

12.6. Other adverse effects

Environmental fate Data not available

Photochemical ozone creation potential Data not available

Ozone depletion potential Data not available

Endocrine disrupting potential Data not available

Global warming potential Data not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

This material, if discarded as produced, is not classified as a hazardous waste

Waste treatment containers to be used for product include IBCs or drums. Recycle material where possible. If heavily soiled or disposal judged as necessary dispose to landfill in accordance with the Directive on waste 2008/98/EC

No specific waste treatment containers to be used for contaminated packaging, packaging should be recycled where possible. Waste treatment method for contaminated packaging should include a rinse with water. Dilute washings should be recycled where possible

SECTION 14: Transport information

14.1. UN number Not applicable

14.2. UN proper shipping name	ADR/RID	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	Not dangerous goods

14.3. Transport hazard class(es) Not applicable

14.4. Packing group Not applicable

14.5. Environmental hazards Not applicable

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable

SECTION 15: Regulatory information

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

Ozone depleting substance (EC No 2037/2000): Not applicable

Persistent organic pollutants (EC No 850/2004) Not applicable

P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER or doctor/physician
P330	Rinse mouth
P337 + P313	If eye irritation persists: Get medical advice/attention
P501	Dispose of contents in accordance with local regulations, dispose of container to appropriate domestic recycling stream

e) Appropriate training for workers

Training for spillage handling and chemical handling is recommended

f) Classification method:

CLP classification