

SECTION 1 ; identification of the substance/ mixture and of the company undertaking

1.1 Product identifier

Product form	Liquid
Product name	Liquid complex fertilizer
Product code	NPK 3-0-0+Ca

1.2 Relevant identified uses of the substance or mixture a uses advised against

Use of the substance/mixture: For crop production, other industry

1.4 Details of the supplier of the safety data sheet

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1.5 Emergency telephone number

Emergency number CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2 ; Hazards identification

2.1 Classification of the substance or mixture

GHS-US classification
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Full text of H-Phrases: see section 16

2.2 Label element

GHS-US labeling
Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H315 - Causes skin irritation H319 - Causes serious eye irritation
Precautionary statements (GHS-US)	P264 - Wash exposed skin thoroughly after handling P280 - Wear eye protection, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove <i>contact lenses</i> , if present and easy to do. Continue rinsing P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362 - Take off contaminated do thing and wash before reuse

2.3 Other hazards

Other hazards not contributing to the classification	Non applicable
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2.4 Unknown acute toxicity (GHS-US)

Non applicable

SECTION 3 ; Composition/information or ingredients

3.1 Substance

Calcium, Nitrate ions and water.

3.2 Mixture

Derived: from animal manure and mined source

Element	Element amount	%	Product identifier
Nitrate Nitrogen (N-NO ₃)	3.00	%	(CAS No)
Calcium oxide (CaO)	3.70	%	(CAS No)
Water (H ₂ O)	79.80	%	(CAS No)

SECTION 4 ; First aids and measures

4.1 Description of first aid and measures

First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash immediately with lots of water. Get medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2 Most Important symptoms and effects, both acute and delayed

Symptoms /injuries after skin contact:	Causes skin irritation.
Symptoms /Injuries after eye contact:	Causes serious eye irritation

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5 ; Firefighting measures

5.1 Extinguishing media

Suitable	Foam. Dry powder. Carbon dioxide. Water spray. Sand.:
Unsuitable	Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

Fire hazard:	Not flammable.
Explosion hazard:	Not available

5.3 Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting.	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 ; Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General measures:	Eliminate ignition sources. Evacuate area. Use protective clothing.
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6.2 For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.
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6.3 For non-emergency responders

Protective equipment	Equipment cleanup crew with proper protection. Ventilate area.
Emergency procedures	

6.4 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.5 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials
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6.6 Reference to other sections

See Heading 8. Exposure controls and personal protection

SECTION 7 ; Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling

Wash hands and other exposed areas. With mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures

Wash exposed skin thoroughly after handling.

7.2 Precautions for safe storage, including any incompatibilities

Storage conditions

Keep only in the original container in a cool, well ventilated place away from: incompatible materials. Keep container closed when not in use.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

7.3 Specific end use (s)

No additional information available

SECTION 8 ; Exposure controls/personal protection

8.1 Control parameters

fertilizer	
ACGIH	Not applicable
OSHA	Not applicable

8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment

Avoid all unnecessary exposure.

Hand protection

Wear protective gloves.

Eye protection

Chemical goggles or safety glasses.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

Wear appropriate mask.

Other information

Do not eat, drink or smoke during use.

SECTION 9 ; Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Color	No colorless
Odor	None.
Odor threshold	No data available
pH	No data available
pH solution	6.5
Relative evaporation rate (butylacetate =1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density at 20 C	No data available
Relative density	No data available
Solubility	Water: Solubility in water of component(s) of the mixture: • 100 %
Log Pow	No data available
Log Kow	No data available
Viscosity. kinematic	No data available
Viscosity. dynamic	No data available
Explosive properties	No applicable
Oxidizing properties,	No data available
Explosive limits	No data available

9.1 Other information

SECTION 10 ; Stability and reactivity

10.1 Reactivity

No additional information available

10.2 Chemical stability

Not established.

10.3 Possibility of hazardous reactions

Not established.

10.4 Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible materials

No additional information available

Strong acids. Strong bases.

10.6 Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide.

SECTION 11 ; Toxicological information

11.1 Information on toxicological effects

Acute toxically	Not classified
Skin corrosion / irritation	Causes skin irritation.
Serious eye damage / irritation	Causes serious eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Not classified
	Based on available data. the classification criteria are not met.
Specific target organ toxically (single exposure)	Not classified
Specific target organ toxically (repeated exposure)	Not classified
Aspiration hazard	Not classified
Potential adverse human health effects and symptoms	Based on available data the classification criteria are not met.

SECTION 12 ; Ecological information

12.1 Toxicity

Calcium Nitrate solution

LC50 fishes 1	162 mg/l (96 h; Pisces; Lethal)
LC50 other aquatic organisms 1	39 mg/l (96 h; Daphnia magna)
EC50 other aquatic organisms 1	200 - 1000 mg/l (Plankton; Motivity test)
LC50 fish 2	1378 mg/l (Poecilia reticulata)
LC50 other aquatic organisms 2	490 mg/l (48 h; Daphnia magna)
TLM fish 1	3000 mg/l (96 h; Lepomis macrochirus)
TLM fish 2	162 mg/l (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	39 mg/l (96 h; Daphnia magna)
Threshold limit other aquatic organisms 2	490 mg/l (48 h; Daphnia magna)

12.2 Persistence and degradability

Calcium Nitrate solution

Persistence and degradability	Not established.
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Calcium Nitrate solution

Biochemical oxygen demand (BOD)	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
THOD	Not applicable
BOD (% of THOD)	Not applicable
	Not applicable

Water (7732-18-5)

Persistence and degradability Not established.

12.3 Bio accumulative potential

Calcium Nitrate solution

Bio accumulative potential Not established

Calcium Nitrate solution

Bio accumulative potential No bio accumulation data available

Water (7732-18-5)

Bio accumulative potential Not established

12.4 Mobility in soil

No additional information available

12.5 Other adverse effects

Effect on ozone layer:

Effect on the global warming:

Other information:

No known ecological damage caused by this product.
Avoid release to the environment.

SECTION 13 ; Disposal considerations

Waste disposal recommendations:

Ecology - waste materials:

Dispose in a safe manner in accordance with local/national regulations.
Avoid release to the environment.

SECTION 14 ; Transport information

In accordance with DOT

Not regulated for transport

Additional information

Other information:

No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15 ; Regulatory information

15.1 US Federal regulations

Calcium Nitrate solution

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 313 - Emission Reporting

1 % Nitrate compounds (water dissociable)

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US Federal regulations

CANADA

Calcium Nitrate solution

WHMIS Classification

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Calcium Nitrate solution

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class C - Oxidizing Material

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

EU-Regulations

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.3 National regulations

Calcium Nitrate solution

Not listed on the Canadian IDL (Ingredient Disclosure List)

Water (7732-18-5)

Not listed on the Canadian IDL (Ingredient Disclosure List)

SECTION 16 ; Other information

Indication of changes:
Other information:

Revision - See: *.
None.

Full text of H-phrases: see section 16:

Eye Irrit 2A	Serious eye damage/eye irritation, Category 2A
Ox. Sol. 3	Oxidizing Solid's, Category 3
Skin Irrit 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidizer
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

NFPA health hazard

NFPA fire hazard

NFPA reactivity

1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

0 - Materials that will no burn.

0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS 111 Rating

Health

Flammability

Physical

Personal Protection

1 Slight Hazard - Irritation or minor reversible injury possible

0 Minimal Hazard

0 Minimal Hazard

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