

1. Identification

Product Name : CitriCal NZ

Synonyms : None

Product Use : Ready to use fertilizer

Manufacturer/Supplier : Ag Concepts Corp

Address : 439 E Shore Dr. Eagle, ID 83616

General Information : 208-388-1131

Transportation Emergency Number

United States: 888-388-1131

New Zealand Distributor

Distributor GROlogic Ltd

Address : PO Box 7347, Taradale, Napier, New Zealand

General Information : 0800 11 44 22

Transportation Emergency Number 0800 11 44 22

2. Hazard Identification

Hazard Pictogram :



Signal Word : Danger

Oral : H302 - Harmful if swallowed

Skin Irritation : H315 - Causes skin irritation

Eye Irritation : H318 - Causes serious eye damage

H319 - Causes serious eye irritation

STOT SE 3 H335 - May cause respiratory irritation

Hazard Categories : Acute Oral Toxicity - 4

Serious Eye Damage/Eye Irritation - 1

Precautionary Statements : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Precautionary Statements : P260 - Do not breathe

dust/fume/gas/mist/vapours/spray.

P264 - Wash skin thoroughly after handling

P270 - Do not eat, drink, or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+312 - IF SWALLOWED: Call a POISON CENTER

or doctor/physician if you feel unwell.

P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 - IF ON SKIN (or hair): Immediately remove all clothing. Rinse skin with water.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+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

P321 - Specific treatment (see ... on this label).

P330 - Rinse mouth

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to ...

3. Composition/Information on Ingredients

Substance/mixture : Mixture

| Component | CAS Number | Weight % |
|------------------------------------|------------|----------|
| Citric acid anhydrous | 77-92-8 | |
| Nitric acid, ammonium calcium salt | 15245-12-2 | |
| Water | 7732-18-5 | |

4. First Aid Measure

General : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice

Eye : Immediately rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing the eye. Immediately call a POISON CENTER or doctor. Get medical attention immediately.

Skin : Wash skin thoroughly after handling. If on skin: wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: get medical attention.

Ingestion : Rinse mouth. Do NOT induce vomiting. If swallowed: Call poison control center or doctor for further treatment advice if you feel unwell. Do not eat, drink, or smoke when using this product.

Inhalation : Do not breathe fumes, mist, vapours or spray. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for

breathing. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

Indication of Immediate Medical Attention and Special Treatment Needed

Note to Physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Potential acute health effects

Eye contact : Causes serious eye damage

Inhalation : May give off gas, vapor or mist that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include: pain, watering, redness

Inhalation : No specific data

Skin Contact : No specific data

Ingestion : Adverse symptoms may include: stomach pain

5. Fire Fighting Measures

Extinguishing Media : Use flooding quantities of water for extinction

Unsuitable : Do not use chemical extinguisher or foam or attempts to smother the fire with steam or sand.
Extinguishing Media
Specific Hazards Arising from the Chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Avoid breathing vapors, fumes, or mist from burning materials. In case of inhalation of decomposition products in a fire, symptoms may be delayed.

Special protective actions for Fire Fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for Fire Fighters : Fire-Fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece

Remark : operated in a positive pressure mode.

Remark : Non-Flammable

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate protective equipment.

For emergency personnel : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled materials and runoff and contact with soil, waterways, water supplies, lakes, streams, ponds, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Methods and Materials for Containment and Cleanup : Move containers from spill area. Collect spilled liquid and reuse, if uncontaminated. If contaminated, cover with inert absorbent material, collect and place in suitable containers for proper disposal. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Precautions for Safe Wear protective gloves, clothing, eye protection and face

Handling : protection. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep containers closed when not in use. Do not eat, drink, or smoke when using this product. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing fume, gas, mist, vapours and spray. Use only outdoors or in a well-ventilated area.

Conditions for Safe Store in accordance with local regulations. Keep out of reach of

Storage : children. This product may freeze at temperatures less than 32 degrees F. Thawing occurs readily at temperatures greater than 32 degrees F. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Containers that have been open must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls/Personal Protection

TLV/PEL : Not established for mixture

Appropriate Engineering If user operations generate fumes, gas, vapor or mist, use

Controls : process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Emissions from ventilation or work process equipment should be

Controls : checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels

Individual Protective Measures

Hygiene measures A washing facility or water for eye and skin cleaning purposes should be present

Eye/Face protection : Safety eyewear complying with an approved standard should be

used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or gases. Tightly-fitting goggles recommended.

Skin Protection

Hand Protection : Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours: protective gloves should be worn under normal conditions of use, Viton neoprene

Body Protection Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other Skin Protection Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : In case of inadequate ventilation, wear respiratory protection

Personal Protective Equipment (Pictograms) :



9. Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear liquid

Flash Point, °F: Not flammable

Boiling Point, °F: Not available

Melting Point (Freezing Point), °F : Not available

Vapor Pressure, mm Hg @ 20 °C : Not established

Vapor Density : Not established

Solubility in Water : Complete

Molecular Formula : Not applicable, formulated mixture

Density, g/mL @ 25 °C : 1.200 to 1.300

pH : 2.5

Flammable Limits : No information found
Auto-Ignition Temperature : Not applicable
Decomposition Temperature : Not established

10. Stability and Reactivity

Reactivity : Normally Stable
Chemical Stability : Stable
Hazardous Decomposition Products : None known
Hazardous Polymerization : Will not occur
Conditions to Avoid : Avoid contamination by any source including metals, dust and organic materials
Incompatible Materials : Incompatible with strong bases and oxidizing agents.
Corrosion : May corrode metals.

11. Toxicology Information

Acute Toxicity : Not classified for mixture
Ingredient - Citric Acid (77-92-8) :
 LD50/p.o./rat: 11,700 mg/kg
 LD50/i.p./rat: 885 mg/kg
 LD50/p.o./mouse: 5,040 mg/kg
 LD50/i.p./mouse: 961 mg/kg

Ingredient - Nitric acid, ammonium calcium salt (15245-12-2) :
 LD50/oral/rat: 500 mg/kg
 LD50/dermal/rat: >2,000 mg/kg
 Eyes - severe irritant (Rabbit) 24-72 h exposure 21 d observation

Skin Corrosion/irritation Causes skin irritation
 Serious eye : Causes serious eye damage
 damage/irritation
Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : Not classified
 Specific target organ : May cause respiratory irritation
toxicity (single exposure)
 Specific target organ : Not classified
 toxicity
 (repeat exposure)
 Teratogenicity : Not classified
 Aspiration Hazard : Not classified

Other Hazards : None currently known

12. Ecological Information

Ingredient - Citric Acid (77-92-8) :

LC50 Fish 1 440-706 mg/l (96h/goldfish)

EC0 Toxicity to bacteria : >10,000 mg/l

Persistence and degradability :

Chemical oxygen demand : (COD) = 728 mg O₂/g

Biological oxygen demand : (BOD) = 538 mg O₂/g

Readily biodegradable : 98% after 2 days

Bioaccumulative potential : None

Ingredient - Nitric acid, ammonium calcium salt (15245-12-2) :

LC50 Fish 1 447 mg/l (48h; Labeo boga)

EC50 Daphnia 1 > 100 mg/l (48h; Daphnia)

LC50 Freshwater > 100 mg/l (72h; Heterosigma akshiwo)

EC50 Other Organisms > 1,000 mg/l (3h; Activated Sludge Microorganisms)

TLM fish 1 17,500 ppm (96h; Poecilia reticulata)

Log Pow <0

Bioaccumulative potential : Not established

13. Disposal Considerations

Waste Disposal Method : Dispose in a safe manner in accordance with local/national regulations.

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or

liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Ecology - waste materials : Avoid release to the environment

United States - RCRA Acute hazardous waste "P" List : Not Listed

United States - RCRA Toxic hazardous waste "U" List : Not Listed

14. Transportation Information

UN Proper Shipping Name : Not regulated by UN, TDG, DOT, IATA or IMDG

Transport Hazard Class : None

UN Identification Number : None

Packaging Group : None

Environmental Hazards : No information found.

Transport in Bulk : No information found.

Special Precautions for Transportator No information found.

:

Freight Classification : Class 60

Ingredient - Nitric acid, ammonium calcium salt (15245-12-2) :

Remark : Ingredient - NOT A DOT REGULATED PRODUCT. 49 CFR 172.102

Special provision 34 specifically removes the calcium nitrate double salt (calcium nitrate and ammonium nitrate) from the hazardous materials table 49 CFR 172.101

15. Regulatory Information

HSNO Approval Number : HSR002571

HSNO Group Standard : Fertilisers (Subsidiary Hazard) Group Standard 2017

16. Other Information

Other Information : None

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