Safety Data Sheet

Calcium Chelate

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03
Canadian Workplace Hazardous Material Information System (WHMIS) 2015
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015
GHS (Globally Harmonized System)

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

1.1. Product identifier

Product name Calcium Chelate

Pure substance/mixture Substance

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

Recommended use Micro-nutrient.

Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Manufacturer
Miller Chemical and Fertilizer, LLC
120 Radio Rd
Hanover, PA 17331
Tel.: 717-632-8921
Fax.: 717-646-1104

Internet http://www.millerchemical.com

E-mail info@millerchemical.com

1.4. Emergency telephone number

CHEMTREC: +1 800 424 9300 or International 1+703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

OSHA Regulatory Status This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Physical Hazards Combustible dust

Health Hazards Not classified.

Environmental Hazard Not classified.

2.2. Label elements

Symbols/Pictograms None

Signal Word Warning

Hazard Statements May form combustible dust concentrations in air

Precautionary Statements

Additional information Not applicable

Hazards not otherwise classified (HNOC) Avoid dust development and deposition - dust explosion risk. Take precautionary measures against static discharges

Other Labeling of special preparations (GHS): This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size.

SECTION 3: Composition/information on ingredients

Pure substance/mixture Non-hazardous Substance

Chemical Name	CAS NUMBER:	Weight-%
Nitrilotriacetic acid	139-13-9	0.2

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice Remove contaminated clothing.

Eye Contact IF IN EYES: Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Skin Contact IF ON SKIN: Wash with plenty of soap and water.

Ingestion If swallowed:Rinse mouth and then drink 200-300 ml of water.

Inhalation If inhaled: Keep patient calm, remove to fresh air.

4.2. Most important symptoms and effects, both acute and delayed No significant symptoms are expected due to the non-classification of the product.

4.3. Indication of any immediate medical attention and special treatment needed Note to physician. Treatment - Symptomatic treatment (decontamination, vital functions).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media
Dry powder. Foam.

Unsuitable Extinguishing Media
Carbon dioxide (CO2).

5.2. Special hazards arising from the substance or mixture
Hazards during fire-fighting:harmful vapours, nitrogen oxides, carbon oxidesEvolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for firefighters

Special protective equipment for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures
Water mist may be used to cool closed containers. No special fire protection measures are necessary. Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	Keep unauthorized personnel away. Avoid dust formation. Ensure adequate ventilation. Use personal protection recommended in Section 8. In case of fire: Stop leak if safe to do so.
For non-emergency personnel	Keep unauthorized personnel away.
For emergency responders	Keep unauthorized personnel away. Use personal protection recommended in Section 8.
6.2. Environmental precautions	Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.
6.3. Methods and material for containment and cleaning up	Nonsparking tools should be used.
6.4. Reference to other sections	See Section 8 for exposure controls and personal protection. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Breathing must be protected when large quantities are decanted without local exhaust ventilation. Protection against fire and explosion: Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry

powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.
Dust explosion class: none.

7.2. Conditions for safe storage, including any incompatibilities

For industrial use only. Store in a closed container. Keep in a dry, cool and well-ventilated place. Keep out of reach of children.

Storage stability:
Storage temperature: 5 - 40 °C
Protect from temperatures below: 5 °C
Protect from temperatures above: 40 °C.

Suitable container/equipment material

High density polyethylene (HDPE), Polypropylene (PP). Paper/Fibreboard.

7.3. Specific end use(s)

See Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No information available

Biological Limit Values

No information available

8.2. Exposure controls

Engineering Measures

Provide a good standard of controlled ventilation (5 to 10 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye/Face Protection
Wear safety glasses with side shields (or goggles).

Skin and Body Protection
Wear suitable protective clothing.

Hand Protection
For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory Protection
For operations where exposure to dust may occur, wear a NIOSH N95 respirator.

Hygiene Measures
The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.

Environmental Exposure Controls

Dispose of in accordance with local regulations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	
Physical State	Free flowing fine granules
Color	White
Odor	Product Specific
pH	7.0
Melting point / Freezing point	Not applicable
Boiling Point / Boiling Range	Not applicable
Freezing Point	Not determined
Flash Point	Not applicable
Evaporation Rate	Not determined
Flammability (solid, gas)	Not highly flammable
Vapor Pressure	0.000001 hPa (20 °C)
Vapor Density	The product is a non-volatile solid.
Density	No data available
Bulk Density	750 kg/m^3
Water Solubility	350 g/l(20 °C)
Partition coefficient	-10.42
Autoignition Temperature	> 530 °C
Decomposition Temperature	240 °C
Viscosity	No information available.
Kinematic viscosity	No data available
Oxidizing Properties	Not applicable
Particle Size	D90 367 µm
Percent Volatile	No data available
VOC Content (%)	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes
No data available

9.2.2. Other safety characteristics
Not applicable

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	Dust Explosion Hazard
10.4. Conditions to avoid	Exposure to extreme heat or open flames. Dust formation
10.5. Incompatible materials	Strong oxidizing agents Strong acids Strong Bases
10.6. Hazardous decomposition	None known

products

SECTION 11: Toxicological information

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

Inhalation Avoid inhalation of the product

Skin Avoid contact with skin and clothing

Eyes Avoid contact with eyes

Ingestion Do not induce vomiting without medical advice
If conscious, wash out mouth and give water to drink

11.1. Information on toxicological effects

Nitrilotriacetic acid

Group 2B - Possibly Carcinogenic to Humans	Monograph 73 [1999] Monograph 48 [1990]
NTP (National Toxicology Program)	Male Rat - Clear Evidence;Female Rat - Clear Evidence;Male Mice - Clear Evidence;Female Mice - Clear Evidence
Acute Toxicity	LD50 Oral (rat) > 5000 mg/kg LC50 Inhal. (rat) > 1.13 mg/l LD50 Oral (rat) > 2000 mg/kg
Respiratory Sensitization	A sensitizing effect on particularly sensitive individuals cannot be excluded. Based on available Data, the classification criteria are not met.
Serious eye damage/eye irritation	Slightly irritating (rabbit)
Skin Corrosion/Irritation	Non-irritant (rabbit)
Skin Sensitization	Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Mutagenicity	No data available Not mutagenic
Reproductive Toxicity	The results of animal studies gave no indication of a fertility impairing effect.
Carcinogenicity	In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties No endocrine disruptors present in concentrations >= 0.1%

11.2.2. Other information Not applicable

SECTION 12: Ecological information

12.1. Toxicity Not considered to be harmful to aquatic life

Nitrilotriacetic acid

WGK Classification (AwSV) 160 WGK: 2

12.2. Persistence and degradability Poorly biodegradable.

12.3. Bioaccumulative potential Does not accumulate in organisms.

Partition coefficient -10.42

12.4. Mobility in soil Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment No data available

12.6. Endocrine disrupting properties No endocrine disruptors present in concentrations >= 0.1%

12.7. Other Adverse Effects None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Methods If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extend of contamination may require use of specialized disposal methods. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

Mode of Transportation (Road, Water, Air, Rail)

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number or ID number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

Global Inventories

Pure substance/mixture Non-hazardous Substance

Chemical Name	CAS Number	Canada (DSL)	Mexico	TSCA: United States
Nitrilotriacetic acid	139-13-9	Present (DSL)	Y	Present

Y: Complies ; A: Active ; - / N: Exempt / Not Listed

EPA

CERCLA
Not regulated

CWA (Clean Water Act)
Not regulated

CAA (Clean Air Act)
Not regulated

U.S. State Right-to-Know Regulations

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Nitrilotriacetic acid	139-13-9	NSRL Carcinogen	Carcinogen Extraordinarily hazardous	Carcinogen	1358	Environmental hazard Special hazardous substance

Y: Listed ; N: Not Listed

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
This product can expose you to chemicals including NITRILOTRIACETIC ACID AND ITS SALTS, which is known to the State of California to cause cancer, and CYANIDE SALTS, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

CANADA

WHMIS
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

SECTION 16: Other information

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Abbreviations and acronyms	OSHA (Occupational Safety and Health Administration of the US Department of Labor) WHMIS (Workplace Hazardous Materials Information System) GHS (Globally Harmonized System) IARC (International Agency for Research on Cancer) PPE (Personal Protection Equipment) TWA (Time-Weighted Average) TLV® (Threshold Limit Value) STEL (Short Term Exposure Limit) RQ (Reportable Quantity) (RQ/% in mixture) DOT (Department of Transportation) TDG (Transport of Dangerous Goods) Canada IATA (International Air Transport Association) IMDG (International Maritime Dangerous Goods) ICAO (International Civil Aviation Organization)
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End of Safety Data Sheet