

TECHNAFLORA PLANT PRODUCTS LTD

Material Safety Data Sheet

1 . Product and company identification

Common name : **Magical**
Material uses : Calcium and magnesium supplement for plants.
Supplier/Manufacturer : Technaflora Plant Products Ltd.
 1533 Broadway Street, 125
 Port Coquitlam, B.C.
 Canada, V3C 6P3
 Tel. 604-468-4769 / 1-800-586-1211
In case of emergency : CHEMTREC, U.S. : (800) 424-9300 International: (703) 527-3887

2 . Hazards identification

Physical state : Liquid.
Odor : Odorless.
Color : Gold.
Hazard status : This material is classified as hazardous under OSHA regulations.
Emergency overview : WARNING!
 CAUSES EYE IRRITATION.
 MAY BE HARMFUL IF SWALLOWED.
 MAY CAUSE SKIN IRRITATION.
 Do not ingest. Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Eyes : Irritating to eyes.
Skin : Moderately irritating to the skin.
Inhalation : No known significant effects or critical hazards.
Ingestion : May be harmful if swallowed.
Potential chronic health effects : Carcinogenic effects Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
 Mutagenic effects Not available.
 Teratogenic effects Not available.
Medical conditions aggravated by over-exposure : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation.
 See toxicological information (section 11)

3 . Composition/information on ingredients

United States

| Name | CAS number | % |
|-------------------|------------|--------|
| Magnesium Nitrate | 10377-60-3 | 5 - 10 |
| Calcium nitrate | 10124-37-5 | 5 - 10 |
| Calcium chloride | 10043-52-4 | 5 - 10 |

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
- Skin contact** : Wash with soap and water. Get medical attention if symptoms occur.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.

5 . Fire-fighting measures

- Flammability of the product** : Non-flammable.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7 . Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Personal protection**
- Eyes** : Safety glasses.
- Skin** : Lab coat.
- Respiratory** : A respirator is not needed under normal and intended conditions of use.
- Hands** : Natural rubber (latex).



HMIS Code/Personal protective equipment : B

Personal protection in case of a large spill : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Hygiene measures : Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.

9 . Physical and chemical properties

Physical state : Liquid.

Color : Gold.

Odor : Odorless.

pH : 5.33 [Acidic.]

Boiling/condensation point : The lowest known value is 100°C (212°F) (Water).

Melting/freezing point : May start to solidify at 0°C (32°F) based on data for: Water.

Relative density : 1.17 (Water = 1)

Vapor pressure : The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).

Vapor density : The highest known value is 0.62 (Air = 1) (Water).

Evaporation rate : 0.36 (Water) compared with Butyl acetate.

Solubility : Miscible in water.

10 . Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive with acids, alkalis, oxidizing materials, reducing materials, organic materials and metals.

Hazardous decomposition products : These products are halogenated compounds, hydrogen chloride.

Hazardous polymerization : Will not occur.

Conditions of reactivity : None known.

11 . Toxicological information

Toxicity data

| Product/ingredient name | Test | Result | Route | Species |
|-------------------------|------|------------|-------|---------|
| Calcium nitrate | LD50 | 302 mg/kg | Oral | Rat |
| Calcium chloride | LD50 | 1940 mg/kg | Oral | Mouse |
| | LD50 | 1000 mg/kg | Oral | Rat |

Acute Effects

Eyes : Irritating to eyes.

Skin : Moderately irritating to the skin.

Inhalation : No known significant effects or critical hazards.

Ingestion : May be harmful if swallowed.

Potential chronic health effects : Carcinogenic effects Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
Mutagenic effects Not available.
Teratogenic effects Not available.

12 . Ecological information

Ecotoxicity data

| Product/ingredient name | Species | Period | Result |
|-------------------------|----------------------------|------------|------------|
| Calcium chloride | Pimephales promelas (LC50) | 96 hour(s) | 4630 mg/l |
| | Lepomis macrochirus (LC50) | 96 hour(s) | 9500 mg/l |
| | Lepomis macrochirus (LC50) | 96 hour(s) | 10650 mg/l |
| | Lepomis macrochirus (LC50) | 96 hour(s) | 11300 mg/l |

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are carbon oxides and water, nitrogen oxides, halogenated compounds. Some metallic oxides.

Toxicity of the products of biodegradation : The products of degradation are as toxic as the product itself.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. 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 and local authority requirements.

14 . Transport information

NAERG : Not applicable.

Regulatory information

UN/ IMDG/IATA DOT : Not regulated.

15 . Regulatory information

United States

HCS Classification : Irritating material

U.S. Federal regulations : TSCA : All components listed.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Magnesium Nitrate; Calcium nitrate; Calcium chloride

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Magnesium Nitrate: Fire hazard; Calcium nitrate: Fire hazard; Calcium chloride: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

| | Product name | CAS number | Concentration |
|--|-----------------|------------|---------------|
| Form R - Reporting requirements | Calcium nitrate | 10124-37-5 | 5 - 10 |
| Supplier notification | Calcium nitrate | 10124-37-5 | 5 - 10 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: Magnesium Nitrate: (generic environmental hazard)
 Massachusetts RTK: Magnesium Nitrate
 New Jersey: Magnesium Nitrate; Calcium nitrate
 California prop. 65: No products were found.

International regulations

International lists : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements (U.S.A.) : CAUSES EYE IRRITATION.
 MAY BE HARMFUL IF SWALLOWED.
 MAY CAUSE SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

HMIS RATING

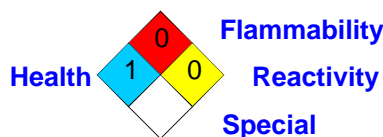
| | |
|---------------------|---|
| Health | 1 |
| Fire hazard | 0 |
| Physical Hazard | 0 |
| Personal protection | B |

HAZARD RATINGS

4- Extreme
 3- Serious
 2- Moderate
 1- Slight
 0- Minimal

See section 8 for more detailed information on personal protection.

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG.

Date of issue : 08/01/2006

Version : 1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.