



MEZFER CROWN INC

Code HDS-FER-LI-EXP-US-02

Review 00

MATERIAL SAFETY DATA SHEET
MEZFER GROWTH 8-24-4

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Name of the product	MEZFER GROWTH 8-24-4
1.2 Other means of identification	Liquid inorganic fertilizer
1.3 Recommended use	Fertilizer for agricultural use
1.4 Company data	MEZFER CROWN INC. 8415 Datapoint Drive, Suite 750, San Antonio, TX 78249

SECTION 2. DANGER IDENTIFICATION

2.1 Product classification

GHS Classification: Health hazard

Acute toxicity: Category 5

2.2 Elements of GHS labels, including precautionary statements

Signal word:

ATTENTION

Hazard statements

H303 May be harmful in case of ingestion

H313 May be harmful in contact with skin

H333 May be harmful if inhaled

Statements of prudence:

P270 Do not eat, drink or smoke while handling this product.

P271 Use only outdoors or in a well-ventilated place.

P273 Do not spread in the environment.

P304+312 IN CASE OF CONSUMPTION: Call a TOXICOLOGY CENTER or a doctor if the person is sick.

P302+352 IN CASE OF SKIN CONTACT: Wash with plenty of soap and water.

P304+340 IN CASE OF INHALATION: Transport the victim outdoors and keep them at rest in a position that facilitates breathing.

P501 Eliminate empty packaging and product waste according with the general law for the prevention and integral management of waste.

SECTION 3. COMPOSITION / INFORMATION ON COMPONENTS

3.1 Mixture

3.1.1 Chemical identity	3.1.2 Common name	3.1.3 CAS number	3.1.4 Concentration
N	Total Nitrogen	7727-37-9	8.00%
P ₂ O ₅	Available Phosphate	1314-56-3	24.00%
K ₂ O	Soluble Potash	12136-45-7	4.00%
B	Boron	7440-42-8	0.02%

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Fe	Iron	7439-89-6	0.05%
Mn	Manganese	7439-96-5	0.05%
Zn	Zinc	7440-66-6	0.10%

SECTION 4. FIRST AIDS

4.1 Caution measures in case of:

- **Eye contact:** Wash with plenty clean water during 15 minutes, lifting and lowering the superior and inferior eyelids with the fingers many times.
- **Skin contact:** Remove the polluted clothes and perfectly wash the affected part with plenty clean water and soap, followed by a rinse with hot water.
- **Ingestion:** If the product is ingested and the person is conscious, wash their mouth with plenty of water. Drink several glasses of water; vomiting may occur spontaneously, but no one must induce it. If the person is unconscious, do not induce vomit, do not try to put anything inside their mouths; lay down the patient ensuring that their mouth and nose are free of obstacles and lay them down in a cool and well-ventilated place. Get medical attention.
- **Inhalation:** Remove the intoxicated person from the contaminated area to avoid further contact. Make sure they breathe without difficulty; if their breathing is difficult, lay them on to a side and remove secretions and objects that obstruct the passage of air.

4.2 Symptoms according to the rout of entry to the body:

- **Ingestion:** Ingestion of large amounts can cause stomachache, dizziness, diarrhea and vomiting.
- **Inhalation:** If inhaled for a long time, it promotes irritation of airways and nose.
- **Skin and eyes (contact and absorption):** Prolonged contact with skin causes redness and irritation; at contact with eyes, causes irritation and redness.

4.3 Indications to the doctor:

- **Chemical group:** Inorganic fertilizer
- **Antidote:** There is no specific antidote.
- **Treatment:** Perform symptomatic treatment. In case of intoxication by ingestion proceed with gastric lavage. Observe the patient continuously. In case of dermal poisoning, bathe the person, after decontaminating the treatment is symptomatic.

SECTION 5. MEASURES AGAINST FIRES

5.1 Means of extinction

Spray water (Yes) Alcohol resistant foam (Yes) CO₂ (Yes) Dry chemical powder (Yes)

5.2 Specific hazards arising from the product

Hazardous combustion products: During a fire, the smoke may contain the original material along combustion products of varied composition that may be toxic and/or irritants. Combustion products may include, but not exclusively: Nitrogen oxides, ammonium, potassium nitrite, carbon dioxide, carbon monoxide and phosphorus oxides.

5.3 Specials measures to be followed by the firefighting groups

Keep people away. Prevent unnecessary access. Use pulverized/atomized water to cool the containers exposed to fire and the fire-affected area, until the fire is extinguished and the danger of re-ignition has disappeared. In order to extinguish the combustible residues of this product, use water in the form of fog, chemical powder or foam. Contain water expansion from extinction if possible. It may cause environmental damage if not contained. Review the sections: "Measures in case of accidental leaks" and "Ecological

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Information". Use positive pressure self-contained breathing equipment and protective fire clothing (includes a fire helmet, jacket, pants, boots and gloves).

5.4 Special fire fighting procedure:

Avoid contact with the product during fire fighting operations. If contact is expected, equip yourself with a fully chemical-resistant firefighter suit and self-contained breathing equipment. If firefighter equipment is not available, equip yourself with chemical-resistant clothing and self-contained breathing equipment and fight fire from a remote location. Move the containers to a place away from the fire zone, as long as this action does not pose a danger to you. When fighting fire do not directly apply jet water. Make a dam to contain the water that has been used to fight the fire.

SECTION 6. MEASURES IN CASE OF SPILL OR ACCIDENTAL LEAK

6.1 Personal precautions, protective equipment and emergency procedures

Keep unneeded and unprotected personnel out of the area. Cleaning operations should be carried out only by trained and adequately protected personnel. Stay against the spill. Ventilate the area of loss of spillage. Avoid breathing vapors, mist or gas. Use appropriate security equipment. For additional information, see Section 8, Exposure/Individual protection controls.

6.2 Precautions relating to the environment

Prevent further leaks or spills if safe. Do not let the product into the sewer system. Discharge into the environment must be avoided.

6.3 Isolation and cleaning methods and materials:

Personal protective equipment must be used and spilled product recovered, contain the spill with absorbent substances such as dry dirt, sand or another non combusting absorbent material. Store in appropriate and closed containers; take them to the nearest authorized hazardous waste collection center. Confine spilled material if possible. (For waste disposal see section 13.)

SECTION 7. HANDLING AND STORAGE

7.1 Personal precautions, protective equipment and emergency procedures

Avoid prolonged or repeated contact with eyes and skin. Personnel involved in handling product must use all recommended personal protection items. Wash yourself thoroughly after handling. Avoid smoking or using anything that may spark. See precautions on section 2.2.

7.2 Safe storage conditions, including any incompatibles

Store in a dry place. Keep the product in the original containers hermetically sealed and with visible label, in a dry, cool and well-ventilated place. Do not store near food, medicine or drinking water. Keep out of reach from children, pregnant or breastfeeding women and pets. Keep away from food and beverages. Do not ingest, inhale and avoid contact with eyes and skin.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters: occupational or biological exposure limits

Does not contain substances with occupational exposure limit values.

8.2 Proper engineering controls

Use technical measures, avoid high concentrations of dust and air areas when necessary. During handling this product, avoid contact with skin, eyes and clothing. Do not use the product without proper protective equipment. Wash your hands before breaks and after

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work. Use local extractors at processing sites where dust can be generated. Ventilate the transportation vehicles adequately before unloading.

8.3 Individual protective measures, such as recommended personal protective equipment

- **Eyes/face protection:** Safety goggles with side protections. Use eye protection equipment approved for chemical products.
- **Skin protection:** Handle with gloves. Gloves must be inspected before use. Use the correct technique for removing gloves (without touching the outer surface of the glove) to avoid skin contact with this product. Discard the contaminated gloves after use. Wash and dry your hands.
- **Body protection:** Use overalls against chemical products, preferably cotton. The type of protective equipment must be chosen according to the concentration and quantity of dangerous substance to the specific workplace.
- **Respiratory protection:** Use respirator with cartridges for dust or particles. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

SECTION 9. HAZARD IDENTIFICATION

9.1	Appearance	Turbid black liquid
9.2	Odor	Mineral
9.3	Odor threshold	No data available
9.4	pH	6.5 (5.0 – 7.0)
9.5	Melting / Freezing point	No data available
9.6	Starting point and boiling range	> 169°C
9.7	Flash point	Non-flammable, not expected to ignite
9.8	Evaporation rate	No data available
9.9	Flammability (solid/gas)	No data available
9.10	Upper/lower limit for flammability or possible explosion	Is not flammable
9.11	Vapor pressure	No data available
9.12	Vapor density	No data available
9.13	Density	1.15 g/ml (1.10 – 1.20 g/ml)
9.14	Solubility(s)	Water: 100% soluble
9.15	Spontaneous ignition temperature	No data available
9.16	Decomposition temperature	No data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions are known under normal conditions of use.

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of dangerous reactions

No polymerization occurs. It is a stable mineral product.

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10.4 Conditions to be avoided

Keep away from flammable and combustible materials/substances. Avoid high temperatures. Follow instructions for handling, storage and transport of this safety data sheet.

10.5 Materials incompatibles

MEZFER GROWTH 8-24-4 is compatible with most commonly used agrochemicals. Prior to applying this product in mixture with any other product, a pre-test shall be performed in order to verify the compatibility between the substances.

10.6 Dangerous decomposition products

During a fire, the smoke may contain combustion products of varied composition that may be toxic and/or irritating. Combustion products may include, but not exclusively: Nitrogen oxides, ammonium, carbon dioxide, carbon monoxide and phosphorus oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

LD50 Oral (rat): > 5000 mg/Kg de body weight

LD50 Dermal (rabbit): > 2500 mg/Kg de body weight

Corrosion or skin irritation

The product is neither corrosive nor skin irritating.

Sensitization

No allergic skin reactions were produced on the tests.

Mutagenicity in germ cells

The product is not mutagenic.

Carcinogenicity

In this product it is not identified any component that presents higher levels than or equal to 0.1%, as a carcinogen known agent or anticipated by the (NTP) National Toxicological Program and by the Occupational Safety and Health Administration (OSHA).

SECTION 12. ECOTOXICOLOGICAL INFORMATION

12.1 Ecotoxicity (aquatic and terrestrial, when having available information)

Mineral product. It is practically non-toxic to birds. It is non-toxic to bees. Non-toxic to fish.

12.2 Persistence and degradability

The product is biodegradable and its components do not report negative ecological effects, since if it reaches the soil it is absorbed by plants or incorporated into the natural cycles of the soil.

12.3 Bioaccumulation potential

The ingredients have a low bio-accumulation potential based on physic-chemical properties.

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12.4 Mobility on the ground

No data available. It is not phytotoxic for most crops under recommended conditions of use.

12.5 Other adverse effects

Maintaining proper handling conditions, it should not be expected ecological problems.

SECTION 13. INFORMATION RELATED TO PRODUCT DISCARDION

13.1 Waste treatment methods

Waste

In case that the waste and/or containers cannot be disposed according to the product label instructions, the disposal of this material must be carried out in agreement with the Local or National Legislative Authorities. Handle empty packaging and product residues in accordance with the provisions of the General Law for the Prevention and Integral Management of Waste, its Regulations or the Management Plan for Empty Pesticide Containers, registered with SEMARNAT.

Contaminated packaging

After using the content, rinse this package three times and pour the solution into the application mixture. Then disable it by grinding it or drilling it and store it in a safe place until its final disposition is defined.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number: 3287

14.2 Official United Nations transport designation: Inorganic toxic liquid, N.E.P.

14.3 Environment hazard class: 6.1

14.4 Packing group: III

14.5 Environmental hazards: Not a marine pollutant

14.6 Bulk transport: Do not transport or store with food, clothing or fodder. Do not consume, inhale and avoid contact with eyes and skin.

SECTION 15. INFORMATION ON REGULATIONS

Specific safety, health and environmental provisions for the hazardous chemical or mixtures concerned.

SECTION 16. OTHER INFORMATION

The information above is considered correct but it is not intended to be exhaustive and should be used only for guidance. The information contained in this document is based on the present state of our knowledge and is applicable to appropriate product safety precautions. It does not represent any guarantee of the proprieties of the product. The company will not be liable for any damage resulting from improper handling or contact with the product indicated above.

Information provided by MEZCLAS Y FERTILIZANTES, S.A. DE C.V.

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