

MATERIAL SAFETY DATA SHEET

ECOMONAS
(Biocontrol Agent)

MARGO BIOCONTROLS PRIVATE LIMITED
NO: 344/8, IV MAIN
SADASHIVANAGAR
BANGALORE-560 080
TEL: +91-80-23613051-3

1. **PRODUCT INFORMATION :**

Product Name : Ecomonas
Group : Pseudomonadaceae; Pseudomonadales
Scientific Name : *Pseudomonas fluorescens*

2. **COMPOSITION / INFORMATION ON INGREDIENTS :**

<u>COMPONENTS</u>	<u>COMPOSITION (%)</u>
<i>Pseudomonas fluorescens</i> (2x 10 ⁸ CFU / gm min.)	: 0.5% min. w/w
Carrier (Talc powder)	: 90.5% w/w
Sticket cum Binder	: 1.0% w/w
Moisture	: 8.0% w/w

3. **HAZARDOUS IDENTIFICATION :**

EMERGENCY OVERVIEW

This is a natural product of biological origin. It is dull white powder, which is intended for use as antagonistic fungus against seed borne and soil borne fungal plant pathogens. There is no specific antidote if this product is ingested. Treat symptomatically. If a large amount has been ingested, give plenty of water to drink and seek medical attention.

Central Insecticides Board signal word : Caution

4. **POTENTIAL HEALTH EFFECTS :**

Route(s) of entry : Eyes, skin, oral, and inhalation.
Human Effects and symptoms of exposure : No known effect.
Acute Eye contact : May cause mild irritation.
Chronic Eye contact : Chronic exposure not likely from normal use.
Acute skin contact : No skin irritation
Chronic skin contact : No skin irritation
Chronic ingestion : Chronic exposure not likely from normal use.
Acute inhalation : Non-irritant to mucous membrane.
Chronic inhalation : Chronic inhalation not likely from normal use.

5. **FIRST AID MEASURES :**

If poisoning is suspected, immediately contact a physician, the nearest Hospital or the nearest Poison Control Centre. Tell the person contacted the complete product name and the type and amount of exposure. Describe any symptoms and follow the advice given.

First aid for eyes : Immediately rinse eyes with a lot of water. Hold eyelids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on advice of a physician.

First aid for skin : Wash with plenty of soap and water, including hair, and under fingernails. Do not apply any medicating agents except on advice of a physician. Remove contaminated clothing and decontaminate.

First aid for inhalation : Move victim from contaminated area to fresh air. Apply artificial respiration, if necessary.

First aid for ingestion : If victim is fully conscious, immediately give large quantities of water to drink and get medical help. Never give anything by mouth to an unconscious person.

6. **FIRE FIGHTING MEASURES :**

Extinguishing media : Dry chemical, foam or carbon dioxide.

Unusual fire and explosion hazards : None known.

Special fire fighting procedures : Wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes, or products of combustion. Prevent use of contaminated buildings, area and equipment until decontaminated.

7. **ACCIDENTAL RELEASE MEASURES.**

Spill or leak procedures : Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long sleeved shirt, long pants, head covering and a NIOSH approved dust or pesticide respirator with a dust filter. For small spills, sweep up, keeping dust to a minimum and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with absorbent material. Seal the container and handle in an approved manner.

8. **HANDLING AND STORAGE :**

Storage temperature (Min./Max.) : Room temperature (not exceeding 40⁰C).

Shelf life .. : Stable

Special sensitivity .. : None known

Handling and storage precautions : Store the material in a well ventilated, secure area out of the reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Always wash thoroughly after handling.

9. **EXPOSURE CONTROLS / PERSONAL PROTECTION:**

Oral protection requirements : Prevent eating, drinking, tobacco usage and cosmetic Application in areas where there is a potential for exposure To the material. Always wash thoroughly after handling.

Eye protection equipments : To avoid eye contact, wear safety goggles.

Skin protection requirements : To avoid skin contact, wear rubber gloves, rubber boots, long sleeved shirt, long pants and head covering.

Respiratory / ventilation requirements : To avoid breathing dust, use with adequate ventilation and wear a NIOSH approved dust or pesticide respirator with a dust filter.

9. **PHYSICAL AND CHEMICAL PROPERTIES :**

Physical form : Powder
Colour : Dull white
Odour : Odourless
Boiling point range : Not applicable
Melting/Freezing point : Not applicable
Flash point : Not applicable
pH : 7.5 ± 0.5
Solubility in water : Sparingly soluble
Bulk density : 0.70 ± 0.05 Kg / litre

10. **STABILITY AND REACTIVITY :**

Stability : Stable
Incompatibilities : Not compatible with chemical bactericide.
Decomposition : Easily biodegradable

11. **TOXICOLOGICAL INFORMATION :**

Oral LD₅₀ (Rat) : Non toxic
Dermal LD₅₀ (Rat) : Non toxic
Eye contact (Rabbit) : Non irritant
Skin contact (Rabbit) : Non irritant

12. **ECOLOGICAL INFORMATION:**

Totally biodegradable in nature.
Non-toxic to birds, fishes, bees and other non-target organisms.

13. **DISPOSAL CONSIDERATION :**

Do not reuse product packing materials and residues. Dispose the product packing materials and residues according to local state and federal health and environmental regulations.

14. **TRANSPORT INFORMATION:**

Not classified as hazardous under transport regulations.
DOT hazard class: Not applicable

15. **REGULATORY INFORMATION:**

OSHA status: N/A
TSCA status: N/A
CERCLA reportable quantity: N/A
RCRA status: N/A

16. **OTHER INFORMATION:**

N/A – Not applicable

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This product is for agricultural use only