

Safety Data Sheet

Microbiate™ Granular 19-19-19 Activator

SECTION 1. IDENTIFICATION

Product Identifier Microbiate™ Granular 19-19-19 Activator
Other Means of Identification
Recommended Use Nutrient activator pack for Microbiate™ SG
Restrictions on Use Do not use in or near potable water sources
Initial Supplier Identifier BioNorth Solutions Inc.
76 Twin City Crossroad
Rosslyn, ON, Canada
P7K 0C6
Emergency Telephone Number 1-807-344-1601

SECTION 2. HAZARD IDENTIFICATION

Classification Label Elements Non-hazardous by WHMIS criteria.
Other Hazards Dusty conditions may cause mechanical aggravation to respiratory mucous membranes.
Slight dermal abrasion is possible with prolonged contact, especially around cuffs and collars.
Dust from this product may cause particulate discomfort to eyes.
Minimal hazard under normal conditions of use. Ingestion of large quantities may cause gastrointestinal discomfort, vomiting, weakness or other medicinally related problems.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Monoammonium phosphate	7722-76-1	36.6%		
Potash (KCl)	7447-40-7	30.7%		
Urea	57-13-6	32.7%		

Notes

SECTION 4. FIRST-AID MEASURES

Inhalation Remove to fresh air. Seek medical attention if condition persists.
Skin Contact Wash with soap and water. Seek medical attention if condition persists.
Eye Contact Flush eyes with running water for at least 15 minutes. Seek medical attention if condition persists.
Ingestion If large amount is ingested, give 2-3 glasses of water and induce vomiting. Seek medical attention.
Most Important Symptoms and

Effects, Acute and Delayed Immediate Medical Attention and Special Treatment

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable

Use media suitable to extinguish source of fire.

Extinguishing Media

Unsuitable

Not available.

Extinguishing Media

Specific Hazards

Arising from the

Product

During extremely high temperature conditions, the product may reach melting point and decompose to release NH₃, SO_x, PO_x, CN, CO_x. Heating mixtures of urea and oxidizers can be dangerous. Hypochlorites react with urea to form nitrogen trichloride that explodes spontaneously in air. Urea nitrate can be formed when urea is contacted with nitric acid. Urea nitrate can explode with friction.

Special Protective Equipment and Precautions for Fire-Fighters

Approach fire from up wind and wear self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures Methods for Containment and Cleaning Up

Keep out of water supplies, lakes, ponds, streams and rivers. This product is a fertilizer and will promote algae growth and may degrade water quality and taste.

For small spills: Use appropriate tools to put the spilled solid in a suitable container for intended use, recycle or disposal. Prevent additional discharge of material, if it is possible to do so without hazard.

For large spills: Prevent spills from entering sewers, watercourses, wells, etc. Product will promote algae growth and may degrade water quality and taste. Notify downstream water users. Recover and place material in suitable containers for recycle, reuse, or disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling Conditions for Safe Storage

If user operations generate dust, fumes or mists, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Store in a cool, dry, well-ventilated area. Prevent spillage and separate from strong oxidizers. Do not blend or store in contact with ammonium nitrate. Dry urea and dry ammonium nitrate will react together to produce a slurry. Avoid using containers, pipes and fittings made of zinc-clad or copper bearing alloys that are corroded by ammonia. Use normal safety procedures and good personal hygiene. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls	Adequate natural or general ventilation.
Individual Protection Measures	
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin Protection	Leather or cloth gloves.
Respiratory Protection	Approved dust respirator when necessary.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Granular.
Colour	Multicoloured.
Odour	Slight metallic odour.
Melting Point and Freezing Point	Not available.
Boiling point or Initial Boiling Point and Boiling Range	Not available.
Flammability	
Upper and Lower Flammability or Explosive Limit	Not available.
Flash point	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
pH	Not applicable.
Kinematic Viscosity	
Solubility	
Partition Coefficient, n-Octanol / Water (Log Kow)	
Vapour Pressure	
Density and Relative density	Not available.
Relative Vapour Density	
Particle characteristics	Not available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	Hazardous polymerisation does not occur.
Conditions to Avoid	Extremely high temperatures (over 130°C (266°F)).
Incompatible Materials	Strong oxidizing agents such as hypochlorites, nitric acid, sodium nitrite, phosphorous pentachloride and nitrosyl perchlorate. Prolonged contact may cause oxidation of unprotected metals. Contamination of solid urea with solid ammonium nitrate or phosphatic fertilizers increases the hygroscopicity of urea.

**Hazardous
Decomposition
Products**

NH₃, SO_x, PO_x, CN, CO_x.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

Acute Toxicity

LC50

LD50 (oral)

2000 mg/kg for phosphate component; other components are less toxic.

LD50 (dermal)

Notes

Non-fatal on exposure.

Skin Corrosion / Irritation

May cause irritation of the mucous membranes and upper respiratory tract

Serious Eye Damage / Irritation

STOT (Specific Target Organ Toxicity) - Single Exposure

Aspiration Hazard

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Respiratory and/or

Skin Sensitization

No evidence.

Carcinogenicity

Not known.

Reproductive Toxicity

Development of Offspring

Non-hazardous by WHMIS criteria.

Sexual Function and Fertility

Non-hazardous by WHMIS criteria.

Effects on or via Lactation

Non-hazardous by WHMIS criteria.

Germ Cell

Mutagenicity

Interactive Effects

Non-hazardous by WHMIS criteria.

SECTION 12. ECOLOGICAL INFORMATION

May be toxic to aquatic life in large quantities.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recover and place material in a suitable container for intended use or disposal.
Ensure disposal is in compliance with government requirements and local regulations.

SECTION 14. TRANSPORT INFORMATION

TGS Classification: Not regulated.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

Date of Latest Revision

26-08-2025
