



## SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200; GHS 4<sup>th</sup> Revision

### SECTION 1 IDENTIFICATION

Product Name	<b>MICROCAT®-VNBAF2 Nutrients</b>
Identified uses	Nutrient blend for biological air filters.
Company	Bioscience, Inc. 2201 Hangar Place, Suite 200 Allentown, PA 18109 Phone: (800) 627-3069 (484) 245-5232
Website	<a href="http://www.bioscienceinc.com">http://www.bioscienceinc.com</a>

### SECTION 2 HAZARD IDENTIFICATION

Hazard Classification	Category	H-statement
Acute toxicity, Inhalation	Not Classified	
Acute toxicity, Oral	Not Classified	
Acute toxicity, Dermal	Not Classified	
Skin irritant, (category 2)	May cause skin irritation	H315
Eye irritant (category 2A)	Causes serious eye irritation	H319
Mutagenicity	Unknown	
Carcinogenicity	Unknown	
Reproductive toxicity	Unknown	

#### Hazard pictograms



#### Signal words

Warning

#### Hazard statements

Causes skin irritation (H315)

Causes serious eye irritation (H319)

#### Precautionary statements

P264 – Wash thoroughly with soap and water after handling.

P280 – Wear protective gloves, eye and/or face protection.

P302 + P352 – IF ON SKIN: Wash with soap and plenty of water.

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing;

P332 + P313 – If skin irritation occurs: Get medical advice/attention.

P337 + P313 – If eye irritation persists: get medical advice/attention.

P362 + P364 – Take off contaminated clothing and wash before reuse.

#### Further information

#### Other hazards

May aggravate pre-existing medical conditions.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Chemical Identity

##### Common name

##### Synonyms

Water soluble nitrogen, phosphorus, potassium and micronutrient supplement for biological air filters

##### Hazardous Components

##### Chemical Name (Concentration)

##### CAS-No

Ammonium nitrate

6484-52-2

Magnesium sulfate

7487-88-9

Monopotassium phosphate

7778-77-0

Potassium nitrate

7757-79-1

##### Non-Hazardous Components

##### Name

##### CAS-No

None

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## SECTION 4 FIRST-AID MEASURES

Eye	If in eyes, hold open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. Call a poison control center or doctor for treatment advice.
Skin	Remove contaminated clothing. Flush affected area with water for 15 minutes. Wash affected area with mild soap and water. Seek medical attention if irritation develops or persists.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call poison control center or doctor for further treatment advice.
Ingestion	If swallowed, call poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to by poison control center or doctor. Do not give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	
Further information	

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## SECTION 5 FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water.
Specific hazards arising from the chemical	Thermal decomposition may produce ammonia as well as toxic oxides of carbon, nitrogen and other metal oxides.
Special protective actions for fire-fighters	Wear self-contained breathing apparatus to fight large fires. Evacuate area. Flood area with water to cool containers; apply water from a safe distance to avoid splattering of molten material.

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Provide sufficient ventilation.
Environmental precautions	Advice for emergency responders: protective equipment see section 8.
Methods and materials for containment and cleaning up	Keep out of lakes, streams, or ponds. Avoid dusting or misting condition during clean-up. If material is uncontaminated, collect and reuse as recommended for product. If contaminated, put in appropriate container and dispose according to local, state, and federal regulations. Keep spills away from drinking water supplies. After spill clean-up, flush area with water. Read label.

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## SECTION 7 HANDLING AND STORAGE

Precautions for safe handling	Eyewash station available. Avoid container breakage. Avoid inhalation or contact with skin, eyes, or clothing. Do not contaminate water sources when disposing of equipment wash waters. Keep out of lakes, streams, or ponds. KEEP OUT OF REACH OF CHILDREN.
Conditions for safe storage, including any incompatibilities	Avoid container breakage. Store in a cool dry area in a closed container or package. Keep away from feed and food stuffs. Organic dusts are a weak explosion hazard. Not hazardous under normal storage and use conditions.

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## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control Parameters

Name	% by Weight	TLV (ACGIH)	PEL (OSHA)
Ammonium nitrate	6484-52-2	10 mg/m <sup>3</sup> {3}	15 mg/m <sup>3</sup> {5}
Magnesium sulfate	7487-88-9	10 mg/m <sup>3</sup> {3}	15 mg/m <sup>3</sup> {5}
Monopotassium sulfate	7778-77-0	10 mg/m <sup>3</sup> {3}	15 mg/m <sup>3</sup> {5}
Potassium nitrate	7757-79-1	10 mg/m <sup>3</sup> {3}	15 mg/m <sup>3</sup> {5}

\* Specific limits not set for these chemicals. Limits are shown for Particles Not Otherwise Regulated (PNOR) or Particles Not Otherwise Classified (PNOC). First number is for total dust second number { } is for respirable dust.

### Personal Safety Equipment

Eye Protection	Not required for routine use. High airborne dust levels or mists of product dissolved in liquid may be irritating – use chemical goggles.
Skin Protection	Not required for routine use. High airborne dust levels or mists of product dissolved in liquid may be irritating – natural rubber gloves; if prolonged or repeated use irritates skin.
Respiratory protection	If airborne dust levels are high and irritation occurs, use NIOSH/MSHA approved respirator for dusts, mists, and fumes to reduce exposure to acceptable levels.
Industrial Hygiene	Maintain good housekeeping. Avoid dusty conditions. Wash hands and exposed skin after contact. Avoid contact with food or food preparation surfaces. Remove and wash contaminated clothing.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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BASIC PHYSICAL AND CHEMICAL PROPERTIES	
Appearance	Mixture, primarily white or off-white prills and granules
Odour	No significant odor
Odour threshold	Information not available
pH	Does Not Apply
Melting point /Freezing Point	Information not available
Initial Boiling point and boiling point range	Does Not Apply
Flash Point	Does Not Apply
Evaporation rate	Does Not Apply
Flammability (solid; gas)	Information not available
Upper/lower flammability or explosive limits	Does Not Apply
Vapour pressure	Does Not Apply
Vapour density	Does Not Apply
Relative density	Information not available
Solubility (ies)	Very soluble in water
Partition coefficient: n-octanol/water	Does Not Apply
Auto-ignition temperature	Information not available
Decomposition temperature	Information not available
Viscosity	Does Not Apply
Other Physical/Chemical Properties	Decomposes on heating

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## SECTION 10 STABILITY AND REACTIVITY

Reactivity	Stable when stored under normal conditions and use.
Possibility of hazardous reactions	
Conditions to avoid	High levels of moisture; this product is very soluble and will turn to liquid solution if it comes in contact with moisture.
Incompatible materials	Liquid fuels
Hazardous decomposition products	Loses chemically combined water upon heating; forms metaboric acid (HBO <sub>2</sub> ) at 212°F - 221°F, then pyroboric acid (H <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ) at 285°F - 320°F, and Boric anhydride at higher temperatures.

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## SECTION 11 TOXOLOGICAL INFORMATION

Acute toxicity	Inhalation of dust may cause respiratory allergy in susceptible individuals.
Skin Corrosion/Irritation	Mild
Serious Eye Damage/Irritation	Mild
Respiratory or Skin Sensitization	May cause respiratory allergy in susceptible individuals: sensitization (shortness of breath, wheezing, and labored coughing) take individual to emergency room.
Ingestion	May cause mouth and throat irritation and/or gastric disturbance.
Germ Cell Mutagenicity	Information not available
Carcinogenicity	Crystalline silica probably carcinogenic NTP: No IARC Monographs: No OSHA Regulated: No
Reproductive Toxicity	Information not available
Specific Target Organ Toxicity – Single Exposure	Information not available
Specific Organ Toxicity – Repeated Exposure	Information not available
Aspiration Hazard	Information not available
General Remarks	Ingestion - Possible nausea, vomiting, diarrhea and possible excitement and convulsions Eye damage/irritation - May cause reversible corneal opacity along with irritation, tearing, and blinking as foreign body in the eye. Skin corrosion/irritation - Mild irritation Respiratory or Skin sensitization - May irritate nose, throat, and lungs. Prolonged exposure may cause; gastrointestinal irritation, muscular weakness and cyanosis (blue-tinged skin); may cause weakness, depression, headache, mental impairment, anemia, methemoglobinemia, and kidney injury. Prolonged exposure over very long period of time (several years, for example) May cause damage to central nervous system or affect the lung, liver or kidney.

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## SECTION 12 ECOLOGICAL INFORMATION

Toxicity	Keep Out of Lakes, Streams, or Ponds.
Persistence and degradability	Information not available
Bioaccumulative potential	Information not available
Mobility in Soil	Information not available
Other adverse effects	Information not available

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## SECTION 13 DISPOSAL CONSIDERATIONS

Methods	Apply to field as fertilizer. If product is contaminated, dispose of in an approved landfill disposal facility, in accordance with applicable local, state and federal regulations.
Containers	n/a

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## SECTION 14 TRANSPORTATION INFORMATION

UN Number	n/a
UN Proper Shipping Name	n/a
Transport Hazard Class	n/a
Packing Group (if applicable)	n/a
Environmental Hazards	n/a
Special Precautions for User	n/a
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	n/a
DOT Proper Shipping Name	Not DOT regulated
Other	May not apply to all shipping situations. Consult 49 CFR, or appropriate Dangerous Goods Regulations for additional description requirements and mode-specific or quantity-specific shipping regulations.

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## SECTION 15 REGULATORY INFORMATION

Contact local authorities for proper disposal of large quantities of unused fertilizer.

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## SECTION 16 OTHER INFORMATION

Key: N/A, n/a – Not available

Observe employment restrictions for people.

Components not precisely identified are proprietary or non-hazardous. All chemical ingredients appear on the EPA TSCA inventory.

The information contained in this Safety Data Sheet, as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty or guarantee. Since the conditions of use are beyond the control of our company, it is the responsibility of the user to determine the conditions of safe use of this product. The information in this sheet does not represent analytical specifications; for this information contact Bioscience, Inc. Technical Department.