



SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200; GHS 4th Revision

SECTION 1 IDENTIFICATION

Product Name **MICROCAT® - NPN Nutrient Blend**

Identified uses For use in stimulating biological activity in soils and sludges.
Company Bioscience, Inc.
2201 Hangar Place, Suite 200
Allentown, PA 18109
Phone: (800) 627-3069
(484) 245-5232

Website <http://www.bioscienceinc.com>

SECTION 2 HAZARD IDENTIFICATION

Hazard Classification	Category	H-statement
Skin irritant	2	H315
Eye irritant	2A	H319
Acute toxicity – Inhalation	4	H332
Specific Target Organ Toxicity – Repeated	2	H371
Mutagenicity	2	H341

Hazard pictograms



Signal words

Warning

Hazard statements

Causes skin irritation (H315)
Causes serious eye irritation (H319)
Harmful if inhaled (H332)
May cause damage to lungs through prolonged or repeated exposure to inhalation of Urea: Known to cause emphysema (H371)
Urea – suspected of causing genetic defects (H341)

Precautionary statements

P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P260 – Do not breathe dust.
P264 – Wash thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only outdoors or in a well-ventilated area.
P280 – Wear protective gloves, clothing, eye, and face protection.
P302 + P352 – IF ON SKIN: Wash with soap and plenty of water.
P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 + P313 – IF exposed or concerned: Call a POISON CENTER or doctor and get medical advice/attention.
P312 – Call a POISON CENTER or doctor if you feel unwell.
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 it before reuse.
P405 – Store locked up.
P501 – Dispose of contents/container in accordance with local, regional, and federal regulations.

Further information

Persons who have a compromised immune system or a history of severe allergic response should avoid contact and/or breathing dust or mist from product handling or manufacturing processes.

Other hazards

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity

Common name

Synonyms

Water soluble nitrogen and phosphorus nutrient salt supplement for microbial process

Hazardous Components

Chemical Name (Concentration)

CAS-No

Urea (>75%)

57-13-6

Diammonium Phosphate (< 25%)

7783-28-0

Tricalcium Phosphate (< 1%)

1306-06-5

Non-Hazardous Components

Name

CAS-No

SECTION 4 FIRST-AID MEASURES

Eye	Product is a severe eye irritant. Direct contact with eyes must be avoided. In case of contact with eyes, flush eyes with low pressure water for at least 15 minutes. If irritation persists, seek medical attention.
Skin	Product may cause slight irritation. Prolonged or repeated direct contact with skin may cause reddening, itching and inflammation. In case of contact with skin, wash skin with soap and water. Remove contaminated clothing and wash. If irritation persists, consult a physician.
Inhalation	May cause sensitization by inhalation in hypersensitive individuals, irritation of respiratory tract, or physical interference with breathing. Avoid inappropriate handling which may result in dust generation. If inhaled, remove from contaminated area to fresh air. Initiate CPR if victim has stopped breathing. Administer oxygen if victim has difficulty breathing. Report situation. Seek medical attention if allergic response or difficulty breathing is exhibited. No incidences of health effects from dust inhalation have been reported.
Ingestion	Ingestion of material may cause gastric disturbance including irritation, nausea, vomiting, and diarrhea. If swallowed, rinse mouth and throat with tap water. Consult a physician if symptoms exist.
Most important symptoms/ effects, acute and delayed	A single dose of 100 g has been reported to cause mild central nervous system depression, e.g. drowsiness and slow reflexes. Sensitization (shortness of breath, wheezing, and labored coughing) take individual to emergency room.
Further information	

SECTION 5 FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical, carbon dioxide, chemical foam or water (all common agents as appropriate to surrounding fire – this material burns with difficulty).
Specific hazards arising from the chemical	Avoid mixtures with strong acids (nitric or perchloric) which may create explosive mixture.
Special protective actions for fire-fighters	Irritating toxic substances may be emitted on thermal decomposition. Exposed firefighters should wear self-contained breathing apparatus and protective clothing.

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	Spilled product should be removed immediately to avoid formation of dust. Contain spill, sweep up avoiding airborne dust. Provide sufficient ventilation. Recover product for reuse if possible. Avoid contamination of waterways and (if large quantity) vegetation.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling	Avoid creating dust. Adequately ventilate when handling this product. Provide eyewash capability.
Conditions for safe storage, including any incompatibilities	Avoid mixtures with strong acids (nitric or perchloric) which may create explosive mixture.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Name	CAS-No	TLV (ACGIH)	PEL (OSHA)
Urea	57-13-6	10mg/m ³ {3}*	15mg/m ³ {5}*
Diammonium phosphate	7783-28-0	10mg/m ³ {3}*	15mg/m ³ {5}*
Tricalcium phosphate	1306-06-5	10mg/m ³ {3}*	15mg/m ³ {5}*

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

Personal Safety Equipment

Eye Protection	Safety glasses with side shields, face shield or chemical goggles.
Skin Protection	Wear long-sleeve shirt, trousers, safety shoes and gloves (rubber or vinyl).
Respiratory protection	Dust mask or respirator for particle removal (NIOSH)
Industrial Hygiene	Maintain good housekeeping. Avoid dusty conditions. Wash hands and exposed skin after contact. Avoid contact with food or food preparation surfaces. If exposure of food surfaces occurs, wash with germicidal detergent or chlorine bleach. Remove and wash contaminated clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White granular solid
Odour	mild ammonia odor
Odour threshold	Information Not Available
pH	7 – 10 (10% sol)
Melting point /Freezing Point	130 °C
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	low
Vapour density	Does Not Apply
Relative density	Information Not Available
Solubility (ies)	100g/ 100mL 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	Specific Gravity at 25°C – 1.3

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions and use.
Possibility of hazardous reactions	Information Not Available
Conditions to avoid	Avoid mixtures with strong acids (nitric or perchloric) which may create explosive mixture, extreme heat.
Incompatible materials	Strong alkalis, active metals (aluminum, magnesium), ammonia, inorganic materials. Strong oxidizers, chlorine compounds.
Hazardous decomposition products	Information Not Available

SECTION 11 TOXOLOGICAL INFORMATION

Acute toxicity	(low) LD50 > 1000 mg/kg body weight
Skin Corrosion/Irritation	Dust may cause slight skin irritation, prolonged or repeated direct skin contact may cause reddening, itching and inflammation.
Serious Eye Damage/Irritation	Dust may cause severe irritation.
Respiratory or Skin Sensitization	Dust may cause irritation or allergy in susceptible individuals. May cause respiratory allergy in susceptible individuals: sensitization (shortness of breath, wheezing, and labored coughing) take individual to emergency room.
Ingestion	May cause severe gastric disturbances, sore throat.
Germ Cell Mutagenicity	Information Not Available
Carcinogenicity	Information Not Available
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	Information Not Available

SECTION 12 ECOLOGICAL INFORMATION

Toxicity	Since this product is a nutrient for microbes and plants, excess in waterways may encourage eutrophication.
Persistence and degradability	Readily biodegradable
Bioaccumulative potential	Information Not Available
Mobility in Soil	Information Not Available
Other adverse effects	Information Not Available

SECTION 13 DISPOSAL CONSIDERATIONS

Methods	Dispose of all wastes in accordance with all Federal, state and local agencies.
Containers	n/a

SECTION 14 TRANSPORTATION INFORMATION

UN Number	Mixture not classified as Hazardous according to Regulation (EC) 1272/2008.
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	Chemicals not otherwise indexed (NOI) non-hazardous.

SECTION 15 REGULATORY INFORMATION

All ingredients used are listed on the USEPA TSCA Inventory list.

Ingredients are not listed in: Reportable Quantity (49CFR 172.101), SARA Title III Section 302/313 (Extremely Hazardous Substance List/ Toxic Chemicals), RCRA Hazardous Waste, California Proposition 65, State Right to Know Laws (Connecticut, Florida, Illinois, Louisiana, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island)

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 microbes in this product are Class 1 microbes, defined by the US Centers for Disease Control as not likely to cause disease in healthy humans and animals. However, contact with open wounds should be avoided; persons who have a compromised immune system or a history of severe allergic response should avoid contact and/or breathing dust or mist from product handling or manufacturing processes.

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.