

SAFETY DATA SHEET

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

SECTION 1 IDENTIFICATION

Product Name **MICROCAT®-XF Filamentous Growth Inhibitor**

Identified uses Natural filamentous growth inhibitor for wastewater treatment plants.

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SECTION 2 HAZARD IDENTIFICATION

Classification	Category	H-statement
Skin irritant	2	H315
Eye irritant	2A	H319

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

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.
Crystalline silica is a known cause of silicosis (a non-cancerous lung disease). Prolonged and/or repeated inhalation must be avoided.

Other hazards

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity

Common name

Synonyms

Non-pathogenic, naturally occurring microorganisms and degradation enzymes absorbed on wheat bran and corn gluten

Hazardous Components

Chemical Name (Concentration)

Chemical Name (Concentration)	CAS-No
Dolomite (< 70%)	16389-88-1
Protease *(< 1%)	9014-01-1
Amylase *(< 1%)	9000-90-2
Crystalline silica (< 0.1%)	14808-60-7

*Actual active enzyme protein concentrations are proprietary information; these concentrations are below the concentrations triggering characterization as a respiratory sensitizer. Please note the "Further information" under Hazard Identification and first aid for inhalation below.

Non-Hazardous Components

Name	CAS-No
Wheat bran	116469-86-4
Corn gluten	66071-96-3
Diatomaceous earth	91053-39-3
Sodium lauryl sulfate	151-21-3

SECTION 4 FIRST-AID MEASURES

Eye	Product may cause eye irritation. Direct contact with eyes should be avoided. In case of contact with eyes, flush eyes with water for at least 15 minutes. If irritation persists, seek medical attention.
Skin	Product may cause skin irritation. Direct contact with skin should be avoided. In case of contact with skin, wash skin with soap and water. Remove contaminated clothing and wash.
Inhalation	May cause sensitization by inhalation in hypersensitive individuals. Avoid product handling which results in dust generation. If inhaled, remove from contaminated area to fresh air. Report situation. Seek medical attention if allergic response exhibited.
Ingestion	Ingestion of material may cause mouth and throat irritation and/or gastric disturbance. If swallowed, rinse mouth and throat with tap water. Drink water.
Most important symptoms/effects, acute and delayed	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 fog
Specific hazards arising from the chemical	
Special protective actions for fire-fighters	

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Provide sufficient ventilation. Advice for emergency responders: protective equipment see section 8.
Environmental precautions	
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.

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	No special requirements. Organic dusts are a weak explosion hazard. Not hazardous under normal storage and use conditions.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control Parameters**

Name	% by Weight	TLV (ACGIH)	PEL (OSHA)
Dolomite	<70	10 mg/m ³	5 mg/m ³
Crystalline silica	<0.1	0.1 mg/m ³	0.1 mg/m ³
Protease	<1	0.00006 mg/m ³ (as pure protease)	
Amylase	<1	None established	
Wheat bran	<40	10 mg/m ³ (nuisance dust)	
Corn gluten	<40	10 mg/m ³ (nuisance dust)	
Diatomaceous earth	<1	10 mg/m ³ (nuisance dust)	
Sodium lauryl sulfate	<3	10 mg/m ³ (nuisance dust)	

* 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	Safety glasses with side shields or face shield.
Skin Protection	HANDS: 0.11 mm Nitrile rubber gloves (breakthrough time > 480 min) Wear long-sleeve shirt, trousers, safety shoes and gloves (rubber or vinyl).
Respiratory protection	Dust mask or respirator for particle removal (NIOSH).

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

BASIC PHYSICAL AND CHEMICAL PROPERTIES	
Appearance	Tan granular powder
Odour	Yeast odor
Odour threshold	Information Not Available
pH	6 – 9 (1% suspension)
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)	< 5% 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	Information Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions and use.
Possibility of hazardous reactions	Information Not Available
Conditions to avoid	Freezing or temperature greater than 100°F (40°C)
Incompatible materials	Strong acids, bases or oxidizers
Hazardous decomposition products	Information Not Available

SECTION 11 TOXOLOGICAL INFORMATION

Acute toxicity	Information Not Available
Skin Corrosion/Irritation	Irritation
Serious Eye Damage/Irritation	Irritation
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	Mouth/throat irritation, 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	Product may contain <1% crystalline silica (CS). IARC has classified CS as probably carcinogenic for humans (2A). NTP lists CS as a substance which may reasonably be anticipated to be a carcinogen. CS is a known cause of silicosis (a non-cancerous lung disease). Enzymes in this product are non-toxic (LD 50 >2 g/kg in rats).

SECTION 12 ECOLOGICAL INFORMATION

Toxicity	Information Not Available
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

EU Directive 2000_54 regarding risks from biological agents: micro-organisms in Class 1 may be used without restriction.

WGK (Water Hazards Class): 0 non-hazardous to water.

WHMIS: Toxic Class D2B (eye irritant)

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 Monera Technologies Corporation, Technical Department.