**SECTION 1 IDENTIFICATION**

|  |  |
| --- | --- |
| Product Name | **MICROCAT® - SX Sewage Treatment Plant Bioformula** |
|  | |
| Identified uses | Used in biological wastewater treatment plants. |
| 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 |
| 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* | exclamation-warning.jpg | | |
| *Signal words* | Warning | | |
| *Hazard statements* | Causes skin irritation (H315)  Causes serious eye irritation (H319) | | |
| *Precautionary statements* | P264; Wash thoroughly after handling.  P280; Wear protective gloves, clothing, and eye protection.  P302 + P352; IF ON SKIN: Gently wash area with soap and plenty of water.  P305 + P351 + P338; IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  P332 + P313; If skin irritation occurs, get medical attention/advice.  P337 + P313; If eye irritation persists: Get medical attention/advice.  P362 + P364; Take off contaminated clothing and wash it before reuse. | | |
| Further information | 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** | Activated carbon and Non-pathogenic, naturally occurring microorganisms absorbed on wheat bran and corn gluten. |
| **Hazardous Components** |
| **Chemical Name (Concentration)** | **CAS-No** |
| *Activated Carbon (*35%) | 7440-44-0 |
| *Dolomite (*< 40%) | 16389-88-1 |
| *Urea* (1-3%) | 57-13-6 |
| *Diammonium Phosphate (*< 1%) | 7783-28-0 |
| *Crystalline silica (*< 0.4%) | 14808-60-7 |
| **Non-Hazardous Components** |  |
| **Name** | **CAS-No** |
| *Wheat bran* | 116469-86-4 |
| *Corn gluten* | 66071-96-3 |
| *Diatomaceous Earth* | 91053-39-3 |

**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 | |  |
| Further information | *Product is not listed with IARC, NTP, ACGIH or OSHA as a carcinogen.* | |

**SECTION 5 FIRE-FIGHTING MEASURES**

|  |  |
| --- | --- |
| Suitable extinguishing media | Dry chemical, carbon dioxide, chemical foam or water fog or spray. |
| Specific hazards arising from the chemical | No special requirements. Organic dusts are a weak explosion hazard. Not hazardous under normal storage and use conditions. |
| Special protective actions for fire-fighters |  |

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

|  |  |
| --- | --- |
| Personal precautions, protective equipment, and emergency procedures | Use with adequate ventilation, provide eyewash capability. Avoid creating dust. |
| Environmental precautions | None |
| Methods and materials for containment and cleaning up | Vacuum or sweep up spills. Place in plastic bags. |

**SECTION 7 HANDLING AND STORAGE**

|  |  |
| --- | --- |
| Precautions for safe handling | Provide eye wash capability. Avoid creating dust, adequately ventilate while handling. |
| 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)** |
| Activated Carbon | | 35 | 2.0 mg/m3 {0.7}\* | 2.1 mg/m3 {0.7}\* |
| Dolomite | | < 40 | 10 mg/m3 | 5 mg/m3 |
| Urea | | 1-3 | 10 mg/m3 {3}\* | 15 mg/m3 {5}\* |
| Diammonium Phosphate | | < 1 | 10 mg/m3 {3}\* | 15 mg/m3 {5}\* |
| Crystalline silica | | < 0.4 | 0.1 mg/m3 | 0.1 mg/m3 |
| Wheat bran | |  | 10 mg/m3 (nuisance dust) |  |
| Corn gluten | |  | 10 mg/m3 (nuisance dust) |  |
| Ground and dehydrated algae | |  | 10 mg/m3 (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 | Wear long-sleeve shirt, trousers, safety shoes, rubber or vinyl gloves. | | | |
| 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 | Tan granular powder |
| Odour | Mild odor |
| Odour threshold | Information not available |
| pH | (1% suspension) 6 – 9 |
| 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% |  |
| 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 | n/a |

**SECTION 10 STABILITY AND REACTIVITY**

|  |  |
| --- | --- |
| Reactivity | stable under normal storage and usage conditions |
| Possibility of hazardous reactions | None known |
| Conditions to avoid | Freezing or temperature greater than 100°F (40°C) |
| Incompatible materials | Strong acids, bases, or oxidizers |
| Hazardous decomposition products | None known |

**SECTION 11 TOXOLOGICAL INFORMATION**

|  |  |
| --- | --- |
| Acute toxicity | Enzymes in this product are non-toxic (LD 50 >2 g/kg in rats). Inhalation of dust may cause respiratory allergy in susceptible individuals. |
| Skin Corrosion/Irritation | Mild |
| Serious Eye Damage/Irritation | Mild |
| Respiratory or Skin Sensitization | Mild |
| Ingestion | May cause mouth and throat irritation and/or gastric disturbance. |
| 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 | Eye: Redness, soreness  Skin: Redness, rash, burning, dry, itching skin  Inhalation: Nasal irritation, headache, cough, shortness of breath  Ingestion: Malaise, dizziness, and nausea, gastrointestinal burns  Product may contain <1% crystalline silica (CS) Crystalline silica probably carcinogenic. 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). |

**SECTION 12 ECOLOGICAL INFORMATION**

|  |  |
| --- | --- |
| Toxicity | Information not available |
| Persistence and degradability | Product is readily biodegradable and accelerates biodegradation of many chemicals. Carbon component is non-biodegradable but non-hazardous in the environment. |
| Bioaccumulative potential | Information not available |
| Mobility in Soil | Information not available |
| Other adverse effects | Information not available |

**SECTION 13 DISPOSAL CONSIDERATIONS**

|  |  |
| --- | --- |
| Methods | Dispose of in accordance with current local authority regulations. Treat as non-hazardous waste. Dispose in non-hazardous permitted facilities. |
| 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.

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

Canadian WHMIS: Toxic Class D2B (eye irritant), controlled product hazard class D2A (respiratory sensitizer).

**SECTION 16 OTHER INFORMATION**

Key: N/A, n/a – Not available

Mixture classified as not dangerous according to Regulation (EC) 1272/2008.

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.