

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name MicroTreat P

Other means of identification

Product Code A66026

Recommended use of the chemical and restrictions on use

Recommended Use Animal feed

Details of the supplier of the safety data sheet

Supplier Address

Danisco US Inc.
Genencor, a Danisco Division
3490 Winton Place
Rochester, New York 14623
USA
+1 (585) 256-5200
+1 (800) 847-5311

E-mail address

SDS.Genencor@DuPont.com

Emergency Telephone Number

+1 (319) 368-7657. For a Distribution incident - Spill, Leak, or Accident
CALL CHEMTREC - 800-424-9300 (within US)
DuPont registration number 671983

2. HAZARDS IDENTIFICATION

Classification

| | |
|------------------|-----|
| Combustible dust | Yes |
|------------------|-----|

Label Elements

Emergency Overview

| | |
|--|------|
| Signal Word: | None |
| Emergency Overview The product contains no substances which at their given concentration, are considered to be hazardous to health. | |
| Hazards not otherwise classified (HNOC) | |
| Other Hazards. Risk which are not included in the classification criteria (e.g. dust explosion hazard) | |
| May form combustible dust concentrations in air | |

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description Preparation

| Chemical Name | CAS No. | Weight-% |
|----------------------------|---------|----------|
| Sucrose | 57-50-1 | 42-47 |
| Propionibacterium P63 | NA | 5-10 |
| Lactobacillus plantarum | NA | 1-5 |
| Bacillus licheniformis | NA | 1-5 |
| Bacillus amyloliquefaciens | NA | <1 |

Only components that require disclosure according to OSHA Hazard Communication Standard 2012 are listed

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First Aid Measures

| | |
|----------------------|--|
| Eye Contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Skin Contact: | IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/ attention. |
| Inhalation | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. |
| Ingestion | Rinse mouth thoroughly with water. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |

Most important symptoms and effects, both acute and delayed

None known.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Extinguish with alcohol-resistant foam, fire extinguishing powder or water spray.

Unsuitable Extinguishing Media Keep product and empty container away from heat and sources of ignition.

Special hazard

Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Explosion Data

Sensitivity to Mechanical Impact Yes.

Sensitivity to Static Discharge Yes.

Protective Equipment and Precautions for Firefighters

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Use personal protection recommended in Section 8.

Environmental precautions and protective procedures

Contain spill.

Methods and material for containment and cleaning up**Methods for Containment** Cover with absorbent or contain. Collect and dispose.**Methods for Cleaning Up** Avoid dust formation. Use industrial vacuum cleaners approved for combustible dust and area electrical classification.**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Minimize dust generation and accumulation. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA- 654).

Conditions for safe storage, including any incompatibilities**Conditions for safe storage, including any incompatibilities** Keep container tightly closed in a dry and well-ventilated place. Protect from light. Keep/store only in original container.**Incompatible Products** Keep away from heat, flames and sparks.**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Guidelines** Based on data available for ingredients.

| Chemical Name | ACGIH TLV | OSHA 8 Hr. TWA: | NIOSH IDLH |
|----------------------------------|---------------------------|---|------------|
| Sucrose 57-50-1 | TWA: 10 mg/m ³ | 15 mg/m ³ TWA 5 mg/m ³ TWA | None known |
| Propionibacterium P63 NA | None known | None known | None known |
| Lactobacillus plantarum NA | None known | None known | None known |
| Bacillus licheniformis NA | None known | None known | None known |
| Bacillus amyloliquefaciens NA | None known | None known | None known |

Appropriate engineering controls**Engineering Measures** Transfer via enclosed lines Formulate in enclosed or ventilated mixing vessels Carefully handle the substance to minimize releases Avoid generation of dust and aerosols**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.**Individual protection measures, such as personal protective equipment****Eye/Face Protection** Wear safety glasses with side shields (or goggles).**Skin and Body Protection** Wear protective gloves and protective clothing.**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|-----------------------------------|
| Appearance | |
| Physical State | Powder |
| Color | Light brown |
| Odor | Typical odor of fermented product |
| Odor Threshold | No data available |
| pH | No data available |
| Melting point / freezing point | No data available |
| Boiling point / boiling range | No data available |
| Flash Point | No data available |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | |
| Upper Flammability Limit | No data available |
| Upper explosive limits | No data available |
| Lower Flammability Limit | No data available |
| Lower explosive limits | No data available |
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Relative density | No data available |
| Specific Gravity | No data available |
| Water Solubility | Soluble |
| Partition Coefficient (n-octanol/water) | No data available |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Dynamic viscosity | No data available |

10. STABILITY AND REACTIVITY**Reactivity**

Not expected.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks. May form combustible dust concentrations in air.

Incompatible Materials

Keep away from heat, flames and sparks.

Hazardous decomposition products

None known.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Acute Toxicity**

| | |
|---------------------|--------------------------------------|
| Inhalation | No data available. |
| Eye Contact | Not expected to cause eye irritation |
| Skin Contact | Not expected to cause irritation |
| Ingestion | Toxicity: Not expected |

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No data available.
Germ cell mutagenicity No data available.
Carcinogenicity No data available.
Reproductive effects No data available.
STOT - single exposure No data available.
STOT - repeated exposure No data available.
Aspiration hazard Not expected.

Numerical measures of toxicity

Component Information Classification based on data available for ingredients

Sucrose

Oral LD50/oral/rat 29700 mg/kg
Eye irritation May cause slight irritation
Skin irritation May cause skin irritation
Respiratory irritation May cause respiratory tract irritation

Bacillus licheniformis

Oral No data available
Dermal No data available
Inhalation No data available
Eye irritation No data available
Skin irritation No data available
Respiratory irritation No data available
Sensitization No data available
Systemic Toxicity No data available
Carcinogenicity No data available

Bacillus amyloliquefaciens

Sensitization No data available
Mutagenic effects No data available
Systemic Toxicity No data available
Carcinogenicity No data available

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------------------------|------------|------------|------------|------------|
| Sucrose 57-50-1 | None known | None known | None known | None known |
| Propionibacterium P63 NA | None known | None known | None known | None known |
| Lactobacillus plantarum NA | None known | None known | None known | None known |
| Bacillus licheniformis NA | None known | None known | None known | None known |
| Bacillus amyloliquefaciens NA | None known | None known | None known | None known |

The following values are calculated based on chapter 3.1 of the GHS document (ATE)

. Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Classification based on data available for ingredients

Contains 0% of components with unknown hazards to the aquatic environment

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to daphnia |
|---------------|-------------------|------------------|---------------------|
| | | | |

| | | | |
|----------------------------------|---------|---------|---------|
| Sucrose 57-50-1 | No data | No data | No data |
| Propionibacterium P63 NA | No data | No data | No data |
| Lactobacillus plantarum NA | No data | No data | No data |
| Bacillus licheniformis NA | No data | No data | No data |
| Bacillus amyloliquefaciens NA | No data | No data | No data |

Persistence and Degradability

Based on data available for ingredients

| Chemical Name | Biodegradation |
|----------------------------------|----------------|
| Sucrose 57-50-1 | No data |
| Propionibacterium P63 NA | No data |
| Lactobacillus plantarum NA | No data |
| Bacillus licheniformis NA | No data |
| Bacillus amyloliquefaciens NA | No data |

Bioaccumulation/Accumulation

No bioaccumulation potential

Mobility

Soluble in water

Other Adverse Effects

None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal Methods**

Dispose of wastes in an approved waste disposal facility. Dispose of contents/containers in accordance with local regulations.

Contaminated Packaging

Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations.

14. TRANSPORT INFORMATION

Harmonized system code

Not applicable

Dangerous Goods Class

Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

15. REGULATORY INFORMATION

US Federal Regulations

| Chemical Name | SARA 313 - Threshold Values % | CERCLA/SARA - Section 302 Extremely Haz |
|----------------------------|-------------------------------|---|
| Sucrose | Not listed | Not listed |
| Propionibacterium P63 | Not listed | Not listed |
| Lactobacillus plantarum | Not listed | Not listed |
| Bacillus licheniformis | Not listed | Not listed |
| Bacillus amyloliquefaciens | Not listed | Not listed |

16. OTHER INFORMATION

Recommended use and restrictions:

Reference sources: NFPA 654, Standard for the Prevention of Fire and Dust Explosion from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 edition

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SDS sections updated 3, 16.

Disclaimer

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End of Safety Data Sheet