

Material Safety Data Sheet

Cartier Environmental Services Inc.

Micro-Solve

November 30, 2011

1. Identification of the Substance/Preparation and Company/Undertaking.

NAME Micro-Solve

Synonyms: Bacterial products.

Common uses: Pulp and paper tailing pond treatment.

Supplied by: **Cartier Environmental Services Inc.**
90, 50512 Range Road 245 Leduc County, AB T4X 0P5
Tel: (780) 955-5520, Fax: (780) 955-0250

2. Composition/Information on Ingredients.

Contains: Bacterial Cultures less than 1% by weight.
 Blend of naturally occurring ingredients as a carrier including, corn and wheat bran and kelp 99%.

<u>Hazardous ingredient / impurity</u>	<u>% Conc.</u>	<u>Classification</u>	<u>Exposure</u>	<u>CAS</u>	<u>EINECS</u>
NONE					

3. Hazards Identification.

Classification: Bacterial culture non pathogenic.

4. First Aid Measures.

Immediate medical attention is required in case of exposure by inhalation, contact with skin or eyes, or if swallowed.

<u>Exposure Route</u>	<u>Symptom</u>	<u>Treatment</u>
Inhalation	Same as exposure to dust.	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete seek medical attention.
Skin Contact	Redness and irritation	Drench the skin with plenty of water. Remove contaminated clothing and wash before reuse. If large areas of the skin are damaged or if irritation persists seek medical attention.
Eye Contact	Same as dust	Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention.
Ingestion	Irritation of gastrointestinal tract, nausea, diarrhea	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell seek medical attention.

Immediate Treatment / Antidote: Symptomatic treatment.

Delayed Effects: Bacterial infection.

5. Fire Fighting Measures.

Suitable Extinguishers: Water

Hazardous Combustion Products: None in normal use. Large dust accumulations can be explosive, similar to a grain dust explosion.

Special Equipment for Fire Fighting: Self contained breathing apparatus

6. Accidental Release Measures.

Personal Precautions: Wear appropriate PPE - See Section 8.

Environmental Precautions: The bacteria and carriers are naturally occurring and should not pose an environmental risk.

Clean up Procedure: Vacuum or sweep up avoiding generation of dust. Place in suitable labeled containers and hold for waste disposal. Wash spill site with water. If bacterial contamination is an issue use chlorine to kill the bacillus spores.

7. Handling & Storage.

Handling

Ventilation: Good general ventilation.

Recommended procedures & equipment: avoid creating dust.

Storage

Temperature range: 0 deg C to 40 deg C for product viability only.

Humidity range: less than 40% for long term exposure of unprotected product for product viability only.

Keep away from: See Section 10.

Suitable storage Media: Original container with closed lid.

Precautions against static discharge: recommended.

8. Exposure Controls/Personal Protection.

Exposure standards:

Component	LTEL (8h TWA)	STEL (15 mins)	Type
None			

Personal Protective Equipment:

Respiratory: Dust mask

Hand: Wash hands after use. Gloves recommended

Eye: Safety glasses or goggles recommended.

Skin: Wash after exposure. Overalls and boots recommended

Environmental Controls: Users should be aware of environmental considerations and their duties under the environmental protection act.

Hygiene Measures: Always wash thoroughly after handling chemicals.

9. Physical & Chemical Properties.

Appearance	Tan colored free flowing powder
Odor	Cereal like pleasant
pH	Neutral 6.0 to 7.0 in water dispersion
Boiling Point/range	Not Applicable
Melting Point/range	Not Applicable
Flash point	Not Applicable
Flammability	Not flammable under normal conditions of storage and handling.
Auto-ignition temperature	Not Applicable
Explosive limits	N/A - except in presence of large dust cloud
Oxidizing Properties	Non
Vapour Pressure	Not Applicable
Relative density	0.6 to 0.8
Solubility in water	Not soluble. Disperses in water.
Solubility in solvent	Not soluble
Partition coefficient	Not Applicable
Viscosity	Not Applicable
Vapour density	Not Applicable
Evaporation rate	Not Applicable
Conductivity	Not Applicable

10. Stability & Reactivity.

Stability: Stable under normal storage and handling conditions.
Conditions to avoid: Accumulations of product in enclosed spaces and generation of dust.
Materials to avoid: Acids and Alkalies may inactivate the bacterial cultures.
Hazardous decomposition products: Oxides of carbon.

11. Toxicological Information.

Toxicological effects: Low Acute oral toxicity although ingestion will cause irritation of the gastrointestinal tract and may result in nausea and diarrhea. May cause mild mechanical irritation to eyes, skin and mucous membranes. May cause irritation from allergic reaction, especially to people that have a history of allergic reaction.

LD_{Lo}

LD₅₀

oral-rat

skin-rabbit

12. Ecological Information.

Environmental Effects: Minimal impact under normal conditions of use and storage. The bacterial cultures are naturally occurring soil type organisms. The carriers are naturally occurring materials.
Mobility: Disperses in water.
Degradability: Contents are biodegradable.

Bio-accumulative potential: Not Known

Aquatic Toxicity: Not Known

13. Disposal Considerations.

Substance: Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations.
Container: As substance.

14. Transport Information.

Not regulated for transport.

UN number		Class
Primary Hazard		Subsidiary Hazard
Packing Group		Emergency Action Code
H.I. Number		Marine Pollutant
Proper Shipping name	Waste water treatment compounds, bacterial culture.	

15. Regulatory Information.

Label Name Micro-Solve
Symbols no risk or safety phrases stipulated
Risk Phrases no risk or safety phrases stipulated
Safety Phrases no risk or safety phrases stipulated
E.C. No n/a
Additional labeling:

Use of this material may be governed by the following regulations: (users are advised to consult these regulations for further information).

The information contained in this data sheet does not constitute an assessment of workplace risks.

16. Other Information.

This material must not be used for direct contact with food.

Further details may be available upon request from your local Cartier Environmental Services Inc. distribution site.

Other: The product has been shown to be free of Salmonella and Shigella (E. Coli) using the procedures outlined by AOAC and USDA.

17. Legal Disclaimer.

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