



SUPER EM PRODUCT BRIEF

PROBIOTIC ODOUR CONTROL AND SEWAGE TREATMENT



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ODOURS, WASTE WATER AND NATURAL SANITIZATION

Super EM is a concentrated, all-natural, biological solution which eliminates odours, breaks down solid organic waste and reduces BOD, COD and Suspended Solid levels in waste water.

Super EM biologically consumes odour-causing toxins and breaks down waste. By combining three distinct classes of probiotic bacteria, as opposed to the commonly used single-strain bacterial products, EM (Efficient Microbes) technology is a powerful probiotic consortium which can establish itself in any environment into which it is applied. When used to handle odours, Super EM attacks the sources of the problem, rather than merely “deodorizing” the symptoms. Foul smelling odours are caused by high levels of ammonia, hydrogen sulphide and methane. These noxious organic compounds actually serve as a food source for the beneficial and efficient microbes in Super EM.

EM is not only effective at breakdown of waste solids and harmful chemicals, but also eliminates disease causing bacteria – preventing harmful bacteria from establishing a population in any environment to which EM is applied.

Super EM is highly effective in the following areas:

- Eliminates 90-100% of all odours from septic tanks, industrial and domestic waste and waste/stagnant water.
- Breaks down organic solid waste found in septic tanks, drains and sewers.
- Drastically reduces fly and mosquito populations in areas where there are odours, such as pit-toilets, wastewater and rubbish sites.

Misting or fogging areas will immediately reduce odours and consistent application of Super EM will eliminate the source of foul odours before they occur.

APPLICATION GUIDE

NOTE: *Volumes and applications stated below are a general guideline. Please contact Efficient Microbes for a free program personalized to your operation.*

SEPTIC TANKS AND STANDING SEWAGE:

The application site and dosage amounts are dependent on the type of treatment system, the age of the system, and the goals of the operation. Application rates can vary from 1: 100 to 1: 10,000 The average rate into a treatment system is around 1: 1,000 (based on daily flow). Please communicate with an Efficient Microbes technical consultant for an exact program for your system.

PIT LATRINES:

For initial treatment on an average sized pit-latrine, pour 1L Super EM into latrine, followed by 500ml every 2 weeks thereafter. After system has stabilised and odours have reduced this can be reduced to 250ml every 2 weeks.

DOMESTIC CLEANING AND SANITIZATION:

Dilute Super EM 1:10 with water and apply to surfaces for natural probiotic inoculation and sanitization.

DRAINS AND ODOURS:

Dilute Super EM 1:5 with water and pour down drain. Spray around surfaces if possible.

SPECIES IN SUPER EM:

Bacillus subtilis, Bifidobacterium animalis, Bifidobacterium bifidum, Bifidobacterium longum, Lactobacillus acidophilus, Lactobacillus buchneri, Lactobacillus bulgaricus, Lactobacillus casei, Lactobacillus delbrueckii, Lactobacillus fermentum, Lactobacillus plantarum, Lactococcus diacetylactis, Lactococcus lactis, Rhodopseudomonas palustris, Rhodopseudomonas sphaeroides, Saccharomyces cerevisiae, and streptococcus thermophilus.

MATERIAL SAFETY DATA SHEET

MATERIAL: Efficient Microbes Super EM
CODE: SU001
Updated: 5.12.2012

PRODUCT NAME: Super EM
DISTRIBUTED BY: Efficient Microbes cc
COMPANY REG #: 2006/184281/23

SECTION I - PRODUCT IDENTIFICATION

GENERAL/ GENERIC NAME: Liquid Microbial Inoculants
HAZARD RATING: HEALTH: 0 Normal Material
FIRE: 0 Will not burn
REACTIVITY: 0 Stable

SECTION II - HAZARDOUS INGREDIENTS

IF PRESENT, CARCINOGENS AND CHEMICALS SUBJECT TO REPORTING ARE IDENTIFIED IN THIS SECTION: No hazardous ingredients present; not hazardous to humans, animals or plants.

SECTION III - PHYSICAL DATA

BOILING POINT: >100 °C
SPECIFIC GRAVITY: 1.2 (25°C)
VAPOR PRESSURE: N/D
SOLUBILITY IN WATER: Complete
VAPOR DENSITY: Air = 1;
MELTING POINT: N/A
% VOLATILE BY VOLUME: 0
EVAPORATION RATE: Equal to water
APPEARANCE AND ODOUR: Dark brown liquid; sweet, fermented smell.
pH OF SOLUTION: < 3.50+0.20

SECTION IV - FIRE AND EXPLOSION INFORMATION

FLASH POINT: N/A
HAZARDOUS DECOMPOSITION
BYPRODUCTS: None
EXPLOSION LIMIT: 0
FIRE FIGHTING PROCEDURES: N/A
EXTINGUISHING: N/A
SPECIAL FIRE &
EXPLOSION HAZARDS: None

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: None; see Section II
HEALTH HAZARDS: None
CARCINOGENICITY: Non-carcinogenic
EFFECTS OF CHRONIC
OVEREXPOSURE: None
PRIMARY ROUTES OF ENTRY: Skin contact, Eye contact, Ingestion, Inhalation

SIGNS AND SYMPTOMS OF EXPOSURE:

SKIN: None
EYES: May cause eye irritation
INHALATION: None
INGESTION: May cause gas

FIRST AID:

IF ON SKIN: None
IF ON EYES: Flush with fresh water
IF INHALED: None
IF INGESTED: Drink water

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Will not occur
STABILITY: Stable with no toxic fumes.
INCOMPATIBILITY: None
HAZARDOUS DECOMPOSITION
OR BYPRODUCTS: None; biodegradable

SECTION VII - SPILL OR LEAK PROCEDURES

IN CASE OF LEAK OR SPILL: Mop up with fresh water, sewer disposal
WASTE DISPOSAL METHOD: Sewer disposal
HANDLING AND STORING
PRECAUTIONS: Store at room temperature
HAZARDOUS WASTE: No

SECTION VIII – HANDLING AND STORAGE

MINIMUM/MAXIMUM STORAGE

TEMPERATURE: 2°C to 49°C
HANDLING: Keep containers closed when not being used. This product presents a weak off-gassing of organic volatiles. Avoid direct or prolonged breathing off-gas.
STORAGE: Store in closed containers. Store in an area that is clean, dry, isolated from all toxic and harmful substances.

ABOUT EFFICIENT MICROBES

Started in 2006, Efficient Microbes is a privately registered company dedicated to the use of beneficial microbes for the improvement of human health, livestock and pet health, agriculture and soil health and environmental sustainability. The company is based in Durban, South Africa.

Efficient Microbes is committed to the consumer and to the environment, and offers the most effective and environmentally friendly solutions to a large number of problems that are normally solved with medicines or harsh chemicals.

For more information visit our website, or contact us for assistance in any area.



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