

Remarkable products from Nature's own laboratory

FORMULA 33

Microbial Aid for Waste Water Treatment Systems

FOR USE IN: *Municipal and municipal/industrial treatment plants, meat processing and rendering plants, dairies, food processing and packaging plants.*

DESCRIPTION

ORGANICA FORMULA-33 contains adapted micro-organisms specifically formulated for use in municipal and food processing waste-water systems.

ORGANICA FORMULA-33 is composed of *aerobic and facultative anaerobic micro-organisms*. These micro-organisms have been carefully selected from nature and adapted for optimum performance in most treatment plants. **ORGANICA FORMULA-33** is more effective in degrading undesirable proteins, fats and carbohydrates than naturally existing bacterial strains. This means more consistent and more balanced treatment performance with fewer systems upsets. The microbial protoplasm produced is a biodegradable source of food higher life forms.

ORGANICA FORMULA-33 contains a natural microbial growth stimulant and co-ordination compound which increases the rate of microbial growth and the ability of the micro-organisms to use nutrients. **ORGANICA FORMULA-33** organisms *secrete significantly higher enzyme concentrations* than unstimulated micro-organisms resulting in *improved waste digestion rates*. Thus *systems may be upgraded without the addition of new equipment*.

ORGANICA FORMULA-33 can alter the physical structure of organic suspended solids. This results in *more efficient flocculation* and more rapid settling of organic suspended solids so vital to the operation of activated sludge plants and activated bio-filters. **ORGANICA FORMULA-33** *improves settling by liquefying and breaking down low density organic matter and by destroying organic molecules which bind water into floc particles*.

Regular use of **ORGANICA FORMULA-33** establishes and maintains a biomass which is resistant to the effects of organic inhibitors commonly found in wastewaters. **ORGANICA FORMULA-33** increases the efficiency of settling systems and eases sludge handling and disposal.

Synthetic detergents and other surfactants are commonly found in municipal and food processing waste waters. These compounds reduce oxygen transfer rates. Reductions in oxygen transfer rate reduce the ultimate capacity of the system to handle wastes. **ORGANICA FORMULA-33** is *specifically formulated to degrade synthetic detergents*. **ORGANICA FORMULA-33** thereby allows vital oxygen to be transferred to the biomass at more rapid rates. This increases waste load handling capacity and system *stability under higher than normal load conditions*.

ORGANICA FORMULA-33's specific, adapted micro-organisms secrete lipase enzymes in significant quantities. *Trapped lipids are enzymatically hydrolysed, liquefied and solubilised*. Solubilised solids are more readily broken down and degraded by the biomass. *Mats or "cakes" in the digesters are eliminated* and grease deposits loosened and removed.

Greases and fats also tend to be surface active and thus interfere with the oxygen transfer. The use of **ORGANICA FORMULA-33** in the presence of large quantities of grease and fat generally increases oxygen transfer efficiency and thus plant capacity.

High soluble BOD and carbohydrate containing waste-waters (such as from breweries, starch and corn milling, potato plants etc) have a tendency to propagate hardy populations of filamentous microbes. **ORGANICA FORMULA-33** can be used to disfavour the propagation of the filaments and improve solids settling so vital to proper system aeration.

DIRECTIONS FOR USE

1. Do not add to the treatment system at a location where toxic or otherwise adverse pH, dissolved oxygen or temperature conditions may exist at peak levels.
2. Application Rates: Consult your Organica representative prior to use for specific instructions.
3. In many cases, it is best used in conjunction with other fine bacterial aids from Organica. Consult your Organica representative with your specific requirements.

For optimal results the waste water and treatment system should meet the following conditions:

	OPTIMUM	MINIMUM	MAXIMUM
Influent pH	7.0	6.0	9.0
Dissolved Oxygen, ppm	2.0+	1.0+	-
C/N/P ratio	100/10/1	100/5/1	100/20/1
Temperature, °C	30 (86F)	10 (50F)	40 (104F)
Toxic Metals, ppm (e.g. hex chromium)	0	0	2

AVAILABILITY

11.36 Kg (25LB) plastic pails and 45Kg polythene-lined fibre drums. Packaged in 227g water soluble bags or bulk. Liquid formulation in 10 and 25 Litre packs.

Guaranteed? You Bet!

Follow the program-
It works or it's FREE.

For more information on *Formula 33*,
Call (0)151 653 0253 or fax (0)151 653 0353

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