

Sewer Guzzler



A proprietary treatment of specially selected bacteria and microbial strains which produce massive concentrations of digestive enzymes when introduced into wastewater and sewerage environments.

Introduction & Challenges:

Sludge: Sludge handling is the number one problem waste water treatment plants. What enters the waste water plant has to exit the plant at some time and some place. The more sludge removed, the greater the expense in labour, offsite hauling and disposal, not to mention that the huge carbon footprint of offsite haulage costs. Sludge handling costs vary from tens of thousands of Rands in small plants, to hundreds of thousands or even several million Rands in larger facilities, on a monthly basis.

Mechanical Equipment Failure: As sludge builds up in the system the waste water's viscosity becomes much thicker which immediately puts enormous strain on all the mechanical machinery in the sewerage plant which results in components failing and breaking more often from the extra torque requirements placed on them for which they are not designed. Equipment repairs in these instances are high capex items

which are mostly unplanned for and extremely expensive.

Electricity Costs: An addition to the mechanical strain sludge causes, the electro mechanical systems in the plant run at a fraction of their intended efficiency resulting in large inefficiencies of scale which greatly increases utility and overall electrical bills which are huge cost items when looking at the overall monthly costs of running a sewer treatment plant.

Downtime: With the problems caused by sludge build-up, mechanical failure is eventually guaranteed, and this results in the total in-operation of smaller plants or partial closure of larger plants for repairs. This in turn places severe operational loads and constraints on other sections of the plant which has a vicious knock-on effect which starts all over again in a continuing and downward spiral.

Odour Pollution: The odour generated by sewer plants is enormous and can often be unbearable depending on the state of the waste in the plant. By pure design or eventual population expansion sewer plants are often situated in residential or commercial areas and the foul odours generated can be unbearable. This has an immediate and negative effect on perception of commerce and industry as well as deteriorating property value, not to mention quality of life for surrounding communities and businesses.

Ongoing Problems:

Such large expenditures and challenges are not likely to decrease because of expanding population, fewer approved disposal sites, inflation, increased use of chemicals which add to sludge volume and deteriorated state of the sludge and waste, as well as ever tighter growing regulations. There is an enormous consumer trend of increasing the disinfectant properties of commercial hygiene, cleaning and personal care products. These disinfectants are transferred downstream and indiscriminately kill all bacteria, good and bad, which are needed for sewer plants to function correctly. Without good bacteria, sewer plants will grind to an immediate halt.

The Solution:

Sewer Guzzler is the solution to reducing or eliminating these costs and solving the problems faced. The usual approach in waste water plants has been to add plant capacity with larger tanks, more air, etc., and to a degree this is sometimes necessary. This is extremely costly and involves enormous capital expenditure which is normally not sufficiently budgeted for, but yet still with a resulting increase in sludge handling and expenses. **It is important to note that the physical aspects of a plant do not digest the waste. It is the enzymes produced by bacteria and**

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microorganisms. The best point of attack is to reduce the volume of solids thereby effecting an immediate saving in hauling costs. This is done by bio-augmentation of the existing microorganisms through addition of biologically active bacterial seed cultures which produce massive amounts of enzymes, on a regular preventive maintenance schedule. Bio-enzyme bacterial augmentation means helping mother-nature do a better job microbiologically rather than from continued use of chemical additives. Just like an aspirin that relieves some cold symptoms, but does not cure the cold, chemical additives temporarily relieve the symptoms of poor digestion, but do not cure the problem. So what exactly are biologically active seed cultures?

Biologically active cultures:

Biologically active seed cultures are microbial strains of naturally occurring microorganisms that have been isolated and trained to produce large amounts of digestive enzymes when introduced into a waste system. The special eco-friendly bacterial enzyme producing strains in Sewer Guzzler are engineered to be thousands of times more active than those found in nature and are chosen for their natural resistance to harsh chemicals and detergents. This is the reason why proper enzyme producing microbial strains in a

product are so important. They must be the right amount and of the proper kinds. Our bacteria are uniquely derived from South African soil cultures, giving them a natural home ground performance advantage and therefore metabolize faster, reproduce at superior rates and live for longer. Every bacterium in Sewer Guzzler is a miniature powerhouse enzyme factory which produces enzymes 24 hours a day. It is the main thrust of biologically active seed cultures. Regular dosing of sewer and waste water plants ensures dominance over naturally occurring less active bacteria for the ultimate results.

Automated Dosing:

A challenge in any environment is the always unpredictable human factor. Precise and accurate dosing is required on a literally per minute basis, hour by hour, 24 hours a day, 365 days of the year. When trying to administrate product in powder form this becomes a physical impossibility. Product theft is also unfortunately a reality in some environments. Sewer Guzzler is uniquely available in liquid as well as traditional powder form. In liquid form this means being able to precisely and accurately dose with the cost effective Eco-Safe Advanced Dosing System with battery backup. The system can be physically secured to eliminate the chance of theft. Once per month the bio-enzyme liquid can be replaced

for completely and reliable autonomy.

Effluent Discharge Results:

Sewer Guzzler gets results, period. In case study after case study on actual sewer plant effluent, it demonstrates massive reductions in COD's, Ammonia, Nitrate, Nitrite, Phosphate, E-Coli, Faecal Coliforms and Odour in a very short space of time. These test results are freely available, please request them.

Features of Product:

- ✓ Hugely reduce sludge & solids
- ✓ Reduce E-Coli & Faecal Coliforms
- ✓ Massively reduce odours
- ✓ Reduce COD, BOD, Ammonia, Nitrates, Nitrites & Phosphates
- ✓ Reduce equipment repairs
- ✓ Reduce monthly running costs

Application Rates:

Vary according to the load on the sewage plant. Can be added to any aerobic or facultative anaerobic zones of the sewage treatment process to augment the biological activity of the natural treatment process. The product should ideally be continuously dosed at the recommended rate and preferably added at the inlet point to the sewage treatment plant.

Dosage Rates:

Shock Dose: 0,1% to 1% of total sludge volume (if required)

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Maintenance Dose:

Concentrate: 1L – 5L per mega litre of daily flow rate

Super Concentrate: 100ml to 500ml per mega litre of daily flow rate

Powder: 100g to 500g per mega litre of daily flow rate (additional nutrient pack included in the powder form for an extra performance boost)

For Best Results, Use With:

- Eco-Safe Pump Station Guzzler, a first of its kind bio-enzyme sludge and waste digester which treats pump stations, then the sewer lines leading to the sewer plant, and lastly eventually also hugely benefitting the sewer plant itself.

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