



PRESENTATION OF

ERGOFITO MICROMIX

SEWAGE TREATMENT

APPLICATION

OUTLINE

- We are pleased to introduce Ergofito Micromix, the vanguard in environmental remediation in the market of the Republic of Angola.

- An uniquely effective Bacteria-Enzymatic blend, 100% natural and environmentally friendly, serving as a

catalyst for organic decomposition, rehabilitation, and conversion of toxic waste elements into viable nutrients for the environment.

- Researched and developed over three decades by Italian scientists, the pioneers in bio-enzyme technology, Micromix sets a

new benchmark in the field of environmental remediation.

For detailed information please visit our product web page at www.ergofito.co.ao.

BACKGROUND

- Ergofito Micromix is a powerful tool in environmental remediation and agricultural biotechnology.

- The core of each product is a unique Bacteria-Enzymatic blend (Micromix), 100% natural and environmentally friendly, which works synergistically together with other natural agents, to organically decompose and

rehabilitate toxic waste elements and convert them into viable nutrients for the environment.

- Ergofito offers products for the Agricultural and Aquaculture, Waste Management, Sewage Treatment, Oil Spill remediation and Disease Control markets.

- Ergofito's proprietary

formulations and exceptional uniformity index, ensures superior quality products with unprecedented and unmatched results. Consequently the Ergofito line of products has gained wide support in multiple international markets and it is growing.

- Essentially, Ergofito has been able to harness the critical conversion elements

naturally occurring in our soils and deploy them in a liquid compound for a large range of environmental remediation applications.



BACKGROUND

- What sets Ergofito Micromix apart from its competitors, whose products fall into the broad category of "bio-remediation agents" is that MicroMix contains a complete set of naturally occurring, living biological microbes – something few, if any, can claim to have at this time. What this means, is that when the right proportion of enzymes and bacteria is present, they are able to live in harmony, without competition between the colonies and subsequent die off. Most companies have not managed to harness this harmony in a complete set of microbiology, and, as in nature, when there is imbalance, things do not survive. This is not the case with Ergofito Micromix

microbial blend, which, when deployed, thrives in the natural elements and continues to provide a tiny ecosystem of waste processing microbes. A distinct feature in any of our products, is that they will not only breakdown the hydro-carbons but they will continue the remediation process whereby all the organics are converted into humic content, which is the only way the remediation can be completed. It is worthwhile noting that the Ergofito Micromix microbes are completely naturally occurring.



BENEFITS OF MICROMIX SEWAGE TREATMENT

1. Product, MicroMix, is 100% natural and environmentally friendly. With 42 species of bacteria producing many more varieties of enzymes which work synergistically to accelerate biodegradation naturally.
2. All organisms remain hydrated through-out the manufacturing and packaging processes meaning that there are no dormant species at the time of application. The fact that rehydration of the bacteria species is not necessary prevents many stress and efficiency issues.
3. Preserved in their natural polymeric units their shelf life is 5 years when stored in ambient, sheltered conditions.
4. Properly applied proprietary BEA biotechnology eliminates E. Coli bacteria in a period of two hours. The time factor is due to the natural life of E. Coli bacteria.
5. MicroMix destroys all pathogens in raw sewage. Where ever it establishes a colony it is dominant in its area. This is achieved by both eating the food that pathogens eat and by consuming the pathogens themselves.



BENEFITS

CONT)

6. From the moment of the first treatment one can expect to observe a constantly increasing elimination of C.O.D's, B.O.D's, phosphorous and ammonia. A potent de-nitrifying action transforms the sewage's nitrogen content into nutritious substances which vegetation can readily assimilate.

7. MicroMix bacteria thrive in aerated raw sewage and easily overrun other hazardous organisms and organic toxins with their fast growing populations. They stop reproducing when there is no oxygen or dead organic matter available to them.

8. The discharge is environmentally friendly and with the correct dosage and retention time can be considered as a high quality organic fertilizer. Well treated sewage effluent is an ideal and nutrient-rich irrigation water. It has all the minerals in safe and organic compounds with none of the harmful pathogens which can poison the land if found in excessive quantities.

9. Parts of the raw sewage get transformed into food for zooplanktons which are safe for maritime and fresh water life to consume. In fact MicroMix is used in the aqua culture industry to promote fish health.

10. All agriculture and fishing products extracted from areas using the discharged effluent are safe for human consumption.



BENEFITS

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11. Sewage plants utilising MicroMix will cut down on manual labour. MBR plants will experience a drop in operations for de-clogging membranes due to the fats & greases levels being much lower than ordinarily. Solids are softer and lighter easing the work load on mechanical tools and equipment and increasing their life-span. The build up of solids takes longer thus decreasing the frequency of having to remove them.

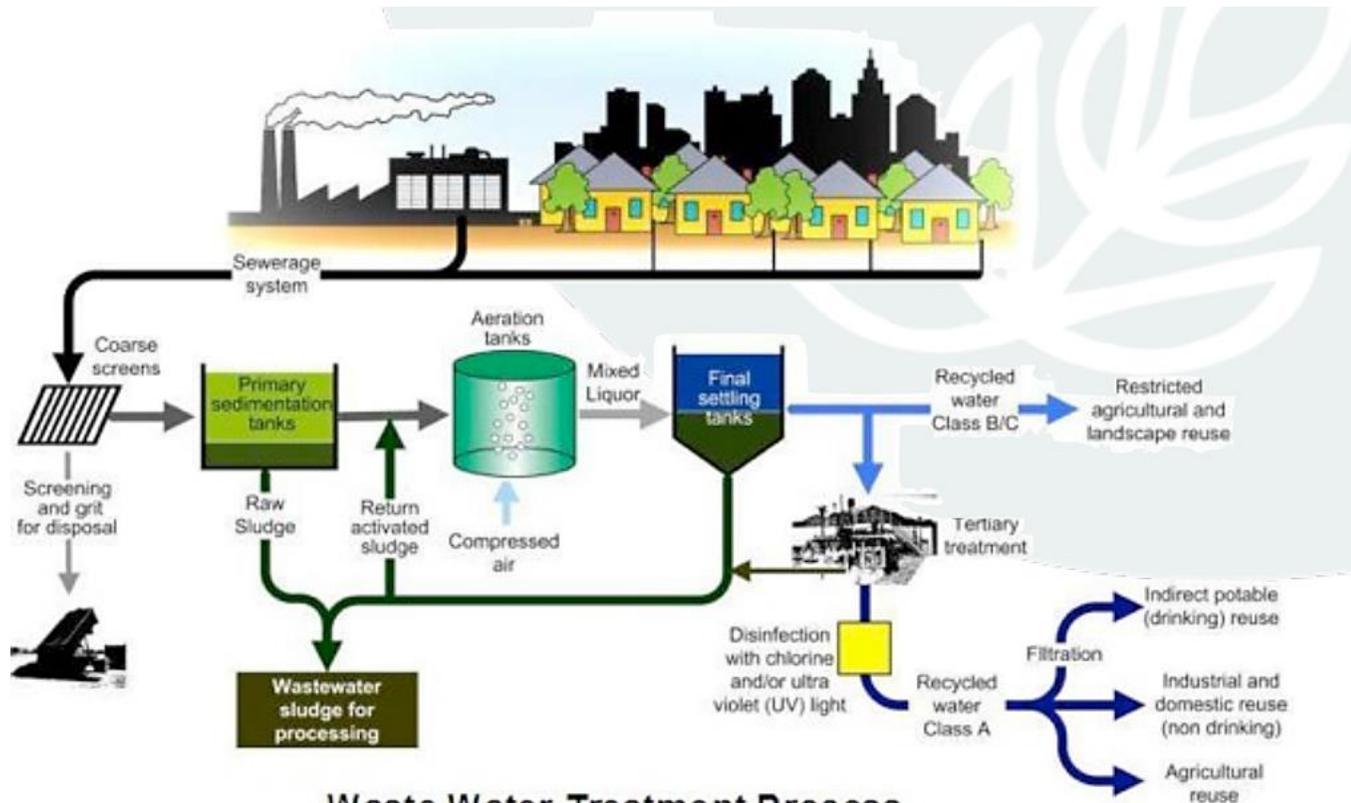
12. Noxious and offensive odours are significantly reduced making a safer and more comfortable work environment. MicroMix destroys the organisms that emit noxious gasses

13. A relatively low oxygen level of 0.2 mg/Lt is required for the bacteria to survive and colonise the sewage. Aeration is only required if the reservoir is completely still and stagnant.

14. After the initial dose the amount of MicroMix required to maintain effective bacterial levels in the plant is 1% to 5% of that initial dose. The ability to lower the dosage is achieved by retaining the bio-solids which are rich in the good bacteria. Operation costs are reduced once good bio-solid management is attained.



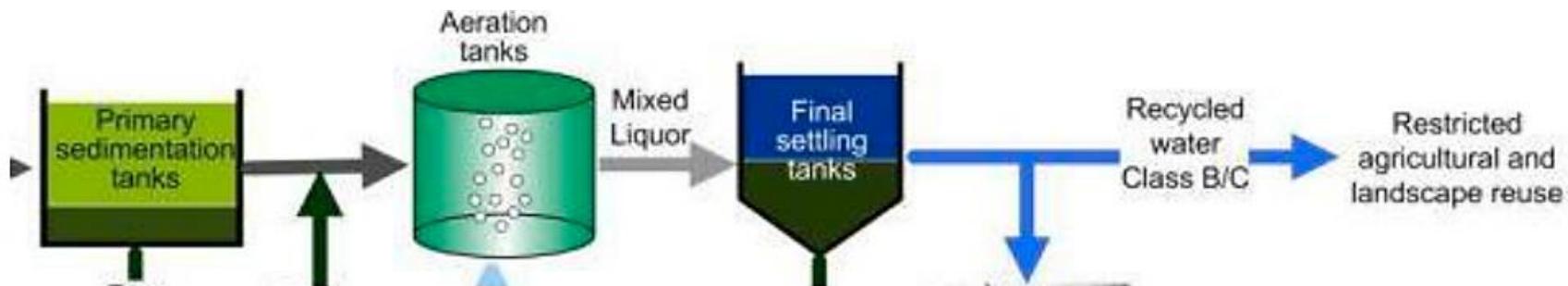
INTRODUCING MICROMIX TO A SEWAGE TREATMENT PLANT APPLICATIONS



Waste Water Treatment Process

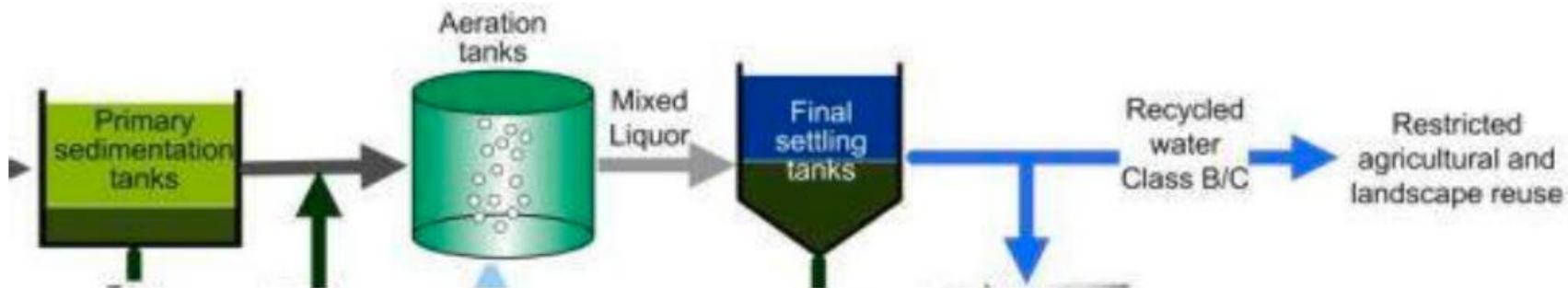
PHASE 1: ESTABLISH BACTERIAL COLONY

- When MicroMix is first introduced it requires 5-7 days retention in the Aeration Tank at a dosage of 50-70 grams per cubic meter.
- This is to establish a dominant colony and is a once off operation.
- When the suspended solids in an Imhoff cone test are at 80% or 800 ml per liter the sewage plant is ready to begin normal operations.
- The Mixed Liquor can now be sent to the Final Settling Tanks where the sludge extracted will be ready for use as a fertilizer.
- The Recycled Water will be of much better quality than before and can be used as irrigation water.



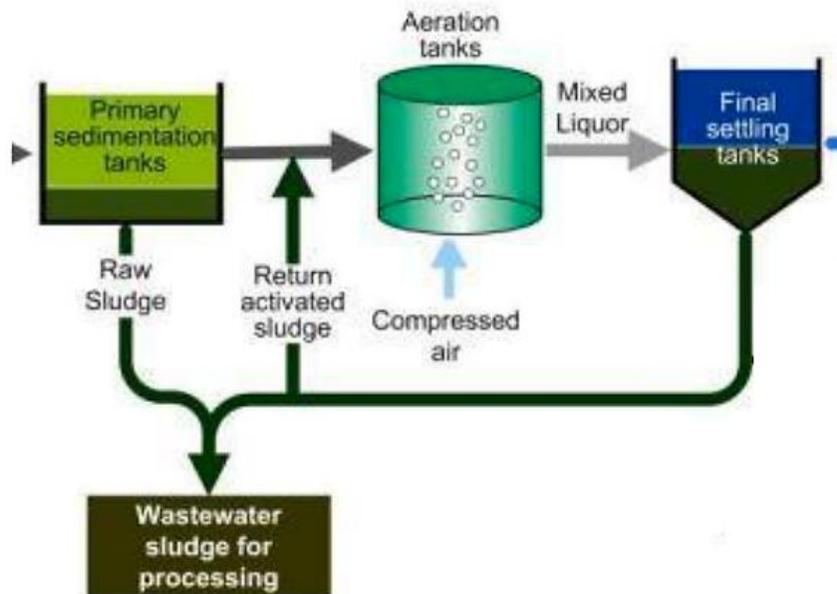
PHASE 2: MAINTAIN BACTERIAL COLONY

- Continue dosing the Aeration Tank with 2 grams of MicroMix per cubic meter every day.
- This will ensure that the effluent remains at acceptable contamination levels.
- The Aeration Tanks should have their suspended solids ratio maintained at 80% to maximize the efficiency of this bio-treatment.



PHASE 3: BIOSOLIDS MANAGEMENT

- Return Activated Sludge is used to maintain suspended solid levels in the Aeration Tanks.
- Whatever is then discharged to mix with the Raw Sludge to make the final Wastewater Sludge helps with the final processing.
- Pure Raw Sludge requires 500 grams of MicroMix per cubic meter while a 50:50 mix with Activated Sludge needs 200 - 300 grams per cubic meter.
- These bio-solids can be composted with the MicroMix being applied to the compost heaps.





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THANK YOU