

HYDRA-ZYME KF 33 – TECHNICAL DATA SHEET

Microbial Growth Enhancer for Environmental and Industrial Use

Overview

Hydra-Zyme KF 33 combines a variety of biological additives (*Phanerochaete sordida*, liposome, yeast extract, peroxidase enzymes and lysozyme chloride) with micro- and macro-nutrients, oxygen source and bio-accelerator to enhance microbial growth.

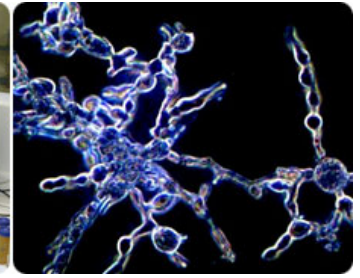
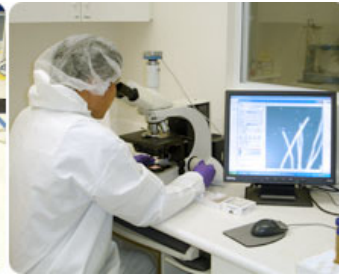
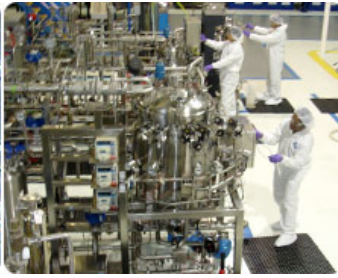
Applications

- Activated Sludge Bio-augmentation
- Bio-enhancement of household waste composting
- Bioremediation of contaminated soils
- BOD Removal
- COD Removal
- Composting enhancer
- Dechlorination
- Manure degrader
- Municipal and industrial wastewater treatment systems
- Odor control in pigs and chicken manure
- Sludge conditioning
- Sludge dewatering
- Sulphide removal
- Supplement for biological dechlorination
- TRC (Total Residue Chlorine) control especially for small municipalities in complying with new effluent guidelines for TRC.

Bio-remediation of Contaminated Soils

Hydra-Zyme KF 33 can be used efficiently as a source of oxygen and micro-nutrients for biomass, thus enhancing its activity. By adding Hydra-Zyme KF 33 to the soil it will act as a buffer to stabilize the substrate and neutralize acidic metabolic by-products.

Hydra-Zyme KF 33 is particularly useful in situations where aeration is not practical such as in soils and underground water bioremediation. In land farming applications, a single addition of Hydra-Zyme KF 33 can greatly decrease or totally eliminate the need for tilling.



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Bio-remediation of Contaminated Soils continued...

The addition of Hydra-Zyme KF 33 to compost piles eliminates the need for mechanical turning and reduces odor problems.

Its use in bioreactors avoids the need for expensive and unreliable aeration systems. In biological treatment facilities the addition of Hydra-Zyme KF 33 helps alleviate stresses due to oxygen deficiency, increases throughput and augments biomass in operations such as rotary biological.

Deodorization of Sludges and Wastewater

Hydra-Zyme KF 33 is used to eliminate sulphide odor from sludges and wastewater. Since Hydra-Zyme KF 33 releases oxygen and micronutrients over a long period of time, a single application to sludge allows odor control over extended periods of time.

Hydra-Zyme KF 33 is also excellent for controlling odor in wet wells or mains.

Dechlorination

Hydra-Zyme KF 33 is used to dechlorinate wastewater and effluents. Residual chlorine is neutralized to form chloride ions rapidly and effectively.

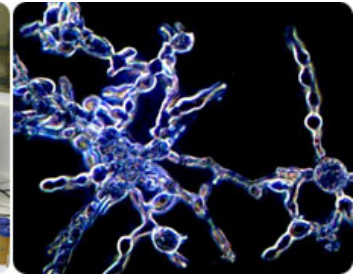
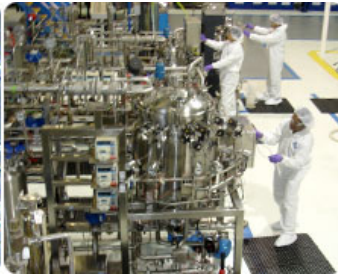
Overdosing with Hydra-Zyme KF 33 results in the release of additional dissolve oxygen (DO) effectively reducing BOD and COD while chlorinating.

Feeding systems can be designed which require little or no operator assistance or expensive monitoring systems.

Sludge Thickening and Conditioning

Hydra-Zyme KF 33 promotes thickening of sludges while conditioning them for easy dewatering. When applied to clarifiers, it promotes better settling and strong flocs while preventing denitrification and bulking. When applied to sludges prior to dewatering, it yields filter cakes that are higher in solids and lower in volume.

Hydra-Zyme KF 33 substitutes lime at a fraction of the application rate, thus greatly reducing disposal costs. Due to its residual effect, Hydra-Zyme KF 33 can control odor from dewatered sludges.



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Gold/Silver Leach Enhancement

Hydra-Zyme KF 33 is a cost-effective way to improve cyanide leaching of gold and silver from ore. By supplying the oxygen necessary for the formation of metal cyanide complexes in-situ in a slow, controlled manner, Hydra-Zyme KF 33 allows for the optimization of cyanide consumption while improving extraction rates and recoveries.

Hydra-Zyme KF 33 is useful in dealing with sulphide and refractory ores, resulting in improved total extraction of precious metals.

Hydra-Zyme KF 33 can also be used in heap leaching applications, whether interspersed in the piles or during amalgamation to eliminate potential problems due to anaerobic conditions.

Hydra-Zyme KF 33, when used in vat leaching, increases the extraction rates resulting in increased production in the leach circuit.

Product Specifications

Appearance: fluffy powder

Colour: tan yellowish

Odour: odourless

Specific Gravity: not applicable

pH: not applicable

Flash Point: None

Solubility in Water: 1% at 30°C

Melting Point: 300°C plus