

Zebec Biologicals

Z-BIO ETP108 Rapid Degradation of Recalcitrant COD

PRODUCT DESCRIPTION

Z-BIO ETP108 encompasses a wide variety of organic degradation capabilities to target a variety of industrial wastes.

The microbial blend incorporates strains capable of degrading fatty acids, surfactants, hydrocarbons, phenolic compounds, ketones and recalcitrant organics.

The microbial activity of **Z-BIO ETP108** is recommended to enhance BOD, COD & TOC removal associated with industrial wastewaters.

Z-BIO ETP108 is recommended when:

- A broad-based spectrum of activity for wastes is desired or needed.
- The goal is recalcitrant COD reduction.
- A full-scale application is desired as an alternative to lab testing on previously untested organic compounds.

APPLICATIONS

Z-BIO ETP108 is recommended for improved biodegradation of wastewaters from the following industries when a rapid response to *undefined* upsets is needed:

- Petroleum and natural gas refining and petro-chemical manufacturing, including many amine bearing organics.
- Steel making and coking operations.
- Food processing including dairies, fruit processing, distilleries, tanneries, poultry processing, vegetable oil recovery, corn sweetener and starch manufacture.
- Specialty chemical manufacturing such as paints, pigments, phenolic resins, rubber, styrene, lubricants & surfactants.
- Textile mills and textile chemical plants.

FEATURES

- Improves maximum rates of organic removal as measured by BOD, COD, or TOC.
- Provides higher growth and utilization rates in response to organic overloads for greater stability.
- Improves biodegradation of Petroleum Hydro-carbons, Solvents, Tannery wastes, Mineral oils, pharmaceuticals, and surfactants.
- Reduces nitrifier toxicity to allow initiation and maintenance of high rates of biological ammonia removal.
- Provides the ability to degrade a wide spectrum of recalcitrant industrial chemicals.

ENHANCED CAPABILITIES

- Ability to degrade variety of aliphatic and aromatic hydrocarbons, fatty acids, proteins, and lipids.
- Enhanced degradation of recalcitrant organics, surfactants, ketones, and phenolics.
- Rapid response to uncharacterized upsets with a broad-spectrum product.

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GENERAL BENEFITS

- Improved waste system stability and reduced frequency and severity of upsets.
- Reduced effluent organics.
- Enhanced flocculation in activated sludge.
- Higher levels and diversity of protozoa.
- Rapid recovery from load-related and toxic upsets.
- Targeted removal of specific organics.
- Reduced impact of production increases or changes in product mix on effluent quality.
- Reduced municipal surcharges.
- More rapid new plant, seasonal, or post-maintenance start up.

PRODUCT CHARACTERISTICS

DRY CULTURE

- Bacteria count 5 billion/gram
- Stability Max loss of 1.0 log/yr when stored under recommended conditions
- pH Range 6.0 - 8.5
- Bulk Density 0.50 - 0.61 g/cm³
- Moisture content 15%
- Appearance Free-flowing, tan powder

AVAILABLE PACKAGING

25kg Container

PRODUCT PREPARATION

Z-BIO ETP108 may be added directly to the waste influent stream or aerated basin.

For toxic wastes or short retention times, re-hydration for 30-90 minutes prior to addition to a system is recommended using 2 gallons of water per pound of **Z-BIO ETP108**

For best results, the make-up water temperature should be between 21° – 31°C.

OPTIMUM CONDITIONS FOR USE

Bacteria in **Z-BIO** products perform within a Ph range of 6.0 - 9.0, with the optimum typically near 7.0.

Wastewater temperature affects activity, with an approximate doubling in maximum growth rate for each 10°C increase in temperature to an approximate upper limit of 40°C, unless otherwise indicated.

Very low activity can be expected below 5°C.

STORAGE & HANDLING

- Store in a cool, dry place.
- Avoid inhalation. Wash hands thoroughly with warm, soapy water after contact.
- Avoid eye contact.