

Advance Biotechnologies of Canada

"Advanced Microbiology for a Clean, Safe Environment"

ADB 110

Surfactants

ADB110 contains a specially formulated range of adapted high performance microorganisms. ADB110 was developed for use in the biological wastewater treatment of chemical wastes. ADB110 will degrade complex organic chemicals such as phenols, benzene compounds, surfactants and alcohols. The ADB110 product also contains a complete micronutrient blend for microbial growth in all conditions. This is particularly important for industrial wastewaters.

ADB110, with its aerobic and facultative anaerobic microorganisms-establishes and maintains a biomass which by providing greater resistance to the effects of organic inhibitors present in chemical waste waters, is able to perform more effectively than the naturally occurring biomass. ADB110 ensures that the natural mechanism for the selection of the biomass population is presented with a range of selected microorganisms. These aerobic and facultative anaerobic bacterias have been taken from their natural environment and then adapted to give optimum performance.

Specifications:

Form:	Free-flowing granular powder
Color:	Brown or Blue
Nutrient Content:	Biological nutrients & stimulants
Plate Count:	5 billion per gram

Application Instructions:

Treatment Plants

<u>Flow Rate</u>	<u>Initial Dosage</u>	<u>Maintenance**</u>
Up to 0.1 lps	½ kg. per day for 3 days	½ kg. per week
Up to 0.5 lps	½ kg. per day for 3 days	1kg. per week
Up to 2 lps	5 kg.*	1½ kg. per week
Up to 5 lps	8 kg.*	2 kg. per week
Up to 25 lps	15 kg.*	¼ kg. per day
Up to 50 lps	25 kg.*	½ kg. per day
Up to 100 lps	50 kg.*	1 kg. per day
Up to 500 lps	50 kg. per 100 lps*	1 kg. per 100 lps per day
Up to 1200 lps	50 kg. per 100 lps*	¾ kg. per 100 lps per day
Up to 10,000 lps	30 kg. per 100 lps*	½ kg. per 100 lps per day

* Spread this initial dosage out over the course of 10 days.

** Add as regularly as possible. If it is required to miss one day, add that day's product with the next dosage.

Dosage rate will vary with flow rates, retention times and system variations. The rates above are for a typical, well maintained system.

Activated Sludge Systems

Activated Sludge Systems include various process flow sheets for example: Extended Aeration, Contact Stabilization, Step Aeration, Oxygen Activated Sludge. The application rate for all products is based on the average daily flow rate to the aeration basin, excluding the return sludge stream. For seasonal or widely fluctuating flows, contact your BIO-SYSTEMS technical representative.

Trickling Filter and Rotating Biological Contactors

The application rate for all products is based on the average daily flow rate to the filter or contactor, excluding any recirculating process stream. For seasonal or widely fluctuating flows, contact your BIO-SYSTEMS technical representative.

Lagoon Systems

- For aerated lagoon systems, the application rate based on the average flow to the lagoon.
- For facultative lagoon systems, the application rate is based on the lagoon surface area:
 - Day 1 through Day 5 20 kg. per 10,000 cubic meters per day
 - Day 6+ 2 kg. per 10,000 cubic meters per week
- For anaerobic lagoons, the application rate is based on the total volume of the anaerobic lagoon.
 - <200,000 liters 1 kg. - 2x per week per 10,000 liters
 - >200,000 liters ½ kg. - 1x per day per 10,000 liters
- For lagoons in cold climates, commence program when the water temperature is a least 50oF (11oC)

Benefits of ADB110:

- Enhances BOD and COD removal while reducing sludge yield.
- Removes chemical deposits and prevent scum formation in holding tanks, sewers, drains and aeration basins.
- Accelerates removal of unpleasant odors associated with handling chemical wastes.
- Prevents the blocking, ponding, and possible collapse of filter bed media.
- Increase the efficiency of overloaded treatment systems.
- Reseed after plant upset.

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