



# BCP35M DEGRADES PETROLEUM PRODUCTS IN A MARINE ENVIRONMENT

## BCP35M

REFINERY AND PETROCHEMICAL WASTE TREATMENT IN A MARINE ENVIRONMENT

### Use in petroleum refinery applications.

#### BIOAUGMENTATION WITH BCP35M CAN:

- Enhance BOD and COD removal, while improving sludge settlement;
- Remove oil deposits and prevent scum formation in holding tanks, sewers, drains and aeration basins;
- Accelerate breakdown of unpleasant odours associated with handling oily wastes.

BCP35M contains aerobic and facultative anaerobic microorganisms to provide greater resistance to the effects of organic inhibitors present in wastewaters with a high salt content.

BCP35M contains Rhamnolipids that greatly increase the biological decomposition of the hydrocarbon by separating the contaminant into smaller droplets. This allows for improved bioavailability for our proprietary bacteria, which have been specifically developed to digest hydrocarbons aggressively. Rhamnolipids are also known to support naturally occurring *in situ* bacteria digestion and degradation.



### SPECIFICATIONS

Description	Tan color free-flowing granular powder
Packaging	250g water-soluble pouches; 10kg plastic pail
Stability	Max. loss of 1 log/yr
pH	6.0 - 8.5
Bulk Density	0.5 - 0.61 g/cm <sup>3</sup>
Moisture Content	15%
Nutrient Content	Biological nutrients and stimulants
Bacteria Count	5 billion per gram
Storage and Handling	DO NOT FREEZE! Do not inhale dusts. Avoid excessive skin contact. See MSDS.

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## APPLICATION INSTRUCTIONS

### Treatment Plants –

Flow Rate	Initial Dosage	Maintenance**
Up to 0.1 L/sec	0.5kg/day for 3 days	0.5 kg/week
Up to 0.5 L/sec	0.5kg/day for 3 days	1.0 kg/week
Up to 2 L/sec	5 kg*	1.5 kg/week
Up to 5 L/sec	8 kg*	2.0 kg/week
Up to 25 L/sec	15 kg*	0.25 kg/day
Up to 50 L/sec	25 kg*	0.5 kg/day
Up to 100 L/sec	50 kg*	1.0 kg/day
Up to 500 L/sec	50 kg/100 L/sec*	1 kg/100 L/sec/day
Up to 1,200 L/sec	50 kg/100 L/sec*	0.75 kg/100 L/sec/day
Up to 10,000 L/sec	30 kg/100 L/sec*	0.5 kg/100 L/sec/day

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

\*\* Add as regularly as possible. If one day is missed, double the daily dosage the next day.

Dosage rates 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: e.g. 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.

### 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.

### Lagoon Systems –

- **Aerated systems** – application rate is based on the average flow rate to the lagoon.

- **Facultative systems** – application rate is based on the lagoon surface area:

Day 1-5	20 kg/10,000m <sup>2</sup> /day
Day 6+	2 kg/10,000m <sup>2</sup> /week

- **Anaerobic systems** – Application rate is based on the total volume of the anaerobic lagoon:

<200,000 L	1 kg – 2x/week/10,000L
>200,000 L	0.5 kg – 1x/day/10,000L

- **Lagoons in cold climates** – commence program when the water temperature is at least 11°C (50°F).

For seasonal or widely fluctuating flows, contact your BIONETIX technical representative.