



Epicore BioNetworks Inc.

LINEBAC[®] **Municipal Collection Line Treatment**

PRODUCT DESCRIPTION

LINEBAC is a highly concentrated microbial ecosystem containing specialized natural microorganisms selected for maximum efficiency in the biodegradation of organic contaminants in industrial and municipal wastewater. It is supplied as a dry fine granule, packaged in water-soluble bags for ease of use.

COLLECTION SYSTEM PROBLEMS

Municipal wastewater contains many dissolved and suspended contaminants that present big problems for collection system managers. Contaminants such as fats, grease, soap scum and cellulose can stick to the collection lines and restrict the water flow, even to the point of causing blockage and subsequent back-ups. Clearing blocked lines the traditional way is a difficult job requiring expensive jetting equipment and usually overtime labor. Back-ups are embarrassing and can be costly for utilities. Now, through biotechnology there is a reliable and easy to use treatment that offers a preventative maintenance solution.

THE BIOTECHNOLOGY SOLUTION: LINEBAC Microbial Ecosystem

Microorganisms are nature's own method of eliminating organic waste. The specially selected mixtures of live microbes contained in LINEBAC, along with the enzymes they secrete, are well suited to digesting fat, oil and grease (FOG) and other organic matter as it enters and flows through the collection system. The LINEBAC microbes adhere to the collection system lines and lift station walls. In digesting organic waste, they reproduce and form colonies to consume even more floating waste and accumulated FOG. The wall coating also acts as a lubricant to help reduce back-ups. The by-products of microbial digestion are perfectly natural, environmentally safe substances like carbon dioxide and water.

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BENEFITS

- Maintains free flowing collection systems.
- Reduces the floating FOG blanket and accumulation of grease on lift station walls.
- Reduces line and manhole deterioration due to sulfates.
- Saves utilities money versus mechanical and chemical line cleaning.
- Environmentally friendly approach.
- Contains no hazardous caustic, surfactants or solvents.
- Supplied in dry granular form for optimum stability.
- Easy to handle water-soluble bags.

PACKAGING

Supplied in is supplied in 0.5 pound water-soluble bags packed in 5 gallon plastic pails.

Epicore BioNetworks Inc.

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IMPORTANT NOTICE TO PURCHASER

“Epicore BioNetworks, Inc. (“Epicore”) warrants that the product conforms to its compositional description and is reasonably fit for the purpose stated on the label when used in accordance with the label instructions under normal conditions of use. There are no other express or implied warranties, whether as to merchantability, fitness for any use, or otherwise, given in respect of the product. Neither Epicore nor its agents shall be liable for any damage, loss, or injury, whether the same arises directly or consequentially, by reason of any matter whatsoever relating to the use of the product, and any buyer’s or user’s exclusive remedy in any instance shall be limited to a refund of the purchase price paid.”

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TREATMENT SUGGESTIONS

- Application techniques are very important to the success of any biological product. LINEBAC treatment dosage depends on how plugged the collection lines are at the start of treatment and how large the ongoing FOG load is.

Gravity Mains:

- (1) Start at the furthest downstream line section.
- (2) Treat the first 500 feet of line first before moving upstream.
- (3) For best results apply LINEBAC one or two manholes upstream of the treatment section.
 - If not able to dose upstream, make two inch slit in bag before dosing or,
 - If dosing at beginning of line, soak bags in water for 15 minutes before dosing.
- (4) Make the initial treatment based on the following rates (# of 0.5 lb. LINEBAC bags):

Line Diameter (Inches)	Light Grease – Initial Treatment		Heavy Grease - Initial Treatment	
	# bags/day	# days	# bags/day	# days
4-6	1	4	2	5
8	2	4	3	5
10	4	4	5	5
12	5	4	6	5
14	6	4	8	5
16	8	4	10	5
18	10	4	12	5
20	12	4	18	5
22	16	4	16	5
24	18	4	18	5

- (5) Repeat the process for each next upstream 500-foot section until the entire line section is clean.
- (6) Once each line section is inoculated with LINEBAC and clean, begin the maintenance treatment program on each 1,000-foot section.
 - After the last section is initially treated and cleaned, the entire line can be treated at one time.
 - Treat once per week.
 - Best results are obtained by treating one manhole upstream of the problem line section.
 - If not able to dose upstream, make a two-inch slit in bag before dosing or,
 - If dosing at beginning of line, soak bags in water for 15 minutes before dosing.
 - Make weekly maintenance treatment based on the above treatment rates.

PRODUCT STORAGE

- Do not store continuously at temperatures above 40°C.
- Do not freeze.
- Store out of direct sunlight in a well-ventilated area.

SHELF LIFE: two years if stored as recommended.