



GREASE-X[®] BIOZYME

Microbial Ecosystem

FAT, OIL & GREASE

F.O.G. (Fat, Oil, Grease) can be a real problem for municipalities, homeowners, businesses, and property managers. Contaminants such as fats, grease, soap scum, and organic matter can stick to the pipe walls restricting the water flow to the point of causing a blockage and subsequent back-up. Back-ups are embarrassing and can be costly when not maintained. Now, through biotechnology, there is a reliable and easy-to-use treatment that offers a **preventative maintenance solution**.

HOW GREASE-X BIOZYME WORKS

Microorganisms are nature's own method of eliminating organic waste. The specially selected mixtures of live microbes contained in GREASE-X BIOZYME, along with the enzymes they secrete, are well suited to digesting fat, oil, grease, and other organic matter as it enters and flows through the collection system. The GREASE-X BIOZYME microbes adhere to the collection system lines and lift station walls. In digesting organic waste, they reproduce and form colonies that continue to consume floating waste and accumulated F.O.G. 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 made of carbon dioxide and water.

PRODUCT DESCRIPTION

GREASE-X BIOZYME is a highly concentrated microbial ecosystem containing specialized natural microorganisms selected for maximum efficiency in the biodegradation of organic contaminants in wastewater systems. It is supplied as a dry fine granule. GREASE-X BIOZYME utilizes natural microorganisms, which are harmless to humans, plants, and animals. Users are advised to consult the Safety Data Sheet for further information and guidance. Avoid concentrated toxicants like heavy metals, disinfectants, and acids.

PRODUCT FORM

For long-term stability, GREASE-X BIOZYME is supplied as a dry fine granule. As supplied, the microorganisms in GREASE-X BIOZYME are alive but in a dormant state. When added to water, the microorganisms become activated and begin vegetative growth utilizing the organic contaminants available. For ease of handling, GREASE-X BIOZYME is supplied in both 2 lb. jars and 5-gallon pails.

PRODUCT STORAGE

Biological products are unlike inert chemical products, they require special treatment during storage and handling.

- Do not store continuously at temperatures above 104°F (40°C).
- Do not freeze.
- Store out of direct sunlight in a well-ventilated area.
- Keep the product dry until ready to use.
- Do not mix with any materials not recommended by RootX, especially disinfectants and harsh chemicals.

PRODUCT SPECIFICATIONS

Overall, the number of microorganisms the product contains best measures microbial product quality. The typical measurement is done by plate count and is reported in terms of microbe cells (called colony-forming units or CFU) per gram of product. GREASE-X BIOZYME is manufactured to have as high strength as possible to give the customer the best value. 1 lb. of GREASE-X BIOZYME contains over 1.3 trillion cells, but the specification is GREASE-X BIOZYME = 3,000,000,000 CFU (colony forming units) per gram minimum.

RECOMMENDED APPLICATIONS

- Wastewater Treatment Plants
- Residential Sewer Lines
- Municipal Sanitary Sewer Lines
- Grease Traps
- Grease Interceptors
- Septic Systems
- Lift Stations
- Wet Wells

Application techniques are very important to the success of any biological product. GREASE-X BIOZYME treatment dosage depends on the size, severity, and how large the continual F.O.G. load is.

- Be sure to open the clogged sewer line before applying (GREASE-X BIOZYME is a preventative maintenance solution it will not open a clogged drain).
- Mix recommended amount of GREASE-X BIOZYME in water and let sit for 15 minutes to activate the microorganisms from their hibernating state.
- Pour the solution of water and GREASE-X BIOZYME into the drain/wastewater system.
- After application, avoid water use (if possible, stop pumps in interceptors and lift stations) for a minimum of 20 minutes.
- Review the application chart below for the inoculation and maintenance schedules.
- **Be sure to start your maintenance program with the Inoculation process.**

RESIDENTIAL – Indoor Drain Pipes and Septic Tanks

Use one 12 oz. glass of warm water per 2 tablespoons of GREASE-X BIOZYME (see 1-2” pipe chart below). For **Septic Systems** apply ½ lb. per day for 5 consecutive days and then ½ lb. per week after per 1,000 gallons.

COMMERCIAL – Sewer Pipe Application Rates

To activate GREASE-X BIOZYME, mix with a pail of water and let sit for 15 minutes (see chart below for BIOZYME quantities)

1 cup of GREASE-X BIOZYME = 0.5 lb.

Initial Inoculation Plan per 1’ - 500’ Section.

Applications for 5 consecutive days

Pipe Dia.	BIOZYME lbs. per day for Average Grease	BIOZYME lbs. per day for Heavy Grease
1-2”	2 tbs.	4 tbs.
3-6”	0.5	1
8”	1	1.5
10”	2	2.5
12”	2.5	3
18”	5	6
24”	7	9

Maintenance Plan 1’ - 500’ Section.

Weekly applications

BIOZYME lbs. per week for Average Grease	BIOZYME lbs. per week for Heavy Grease
2 tbs.	4 tbs.
0.5	1
1	2
2	3
2.5	3.5
5	6
7	9

COMMERCIAL KITCHENS

To activate GREASE-X BIOZYME, mix with a pail of water and let sit for 15 minutes (see chart below for BIOZYME quantities)

<u>Flow Rate</u>	<u>First Week</u>	<u>There After</u>
Indoor Grease Trap	¼ lb. / day	½ lb. / week
Grease Interceptor		
Per every 1000 Gallons	½ lb. / day	½ lb. / week
Over 1000 Gallon Tank	1 lb. / day	1 lb. / week

MUNICIPAL SEWER MAIN LINES (See Application Rate Chart on Page 2)

- Start at the furthest downstream line section.
- Treat the first 500’ of the line before moving upstream.
- For best results apply GREASE-X BIOZYME to one or two manholes upstream of the treatment section and apply dry if sufficient flow is present. If dosing at beginning of the line, soak GREASE-X BIOZYME in water for 15 minutes prior to application.
- Repeat the process for each next upstream 500’ section until the entire line section is treated.
- Once each line section is inoculated with GREASE-X BIOZYME and clean, begin the maintenance treatment program on each 500 - foot section.

LIFT STATIONS

- Raise upper and lower floats 1-6 inches.
- For best results apply GREASE-X BIOZYME one manhole upstream of the lift station and apply dry if sufficient flow is present. If dosing at the lift station soak GREASE-X BIOZYME in water for 15 minutes prior to application.
- Apply GREASE-X BIOZYME based on the level of flow according to the schedule indicated below.
- If heavy grease is present, GREASE-X EMULSIFIER can be applied one week prior to the GREASE-X BIOZYME application to enhance its effectiveness.

LIFT STATION APPLICATIONS RATES

<u>Flow Rate</u>	<u>1st Week</u>	<u>There After</u>
Up to 50,000 gpd	1 lb. / day	1 lb. / week
50,000 to 100,000 gpd	2 lb. / day	2 lb. / week
100,000 to 200,000 gpd	3 lb. / day	3 lb. / week
200,000 gpd and above	4 lb./ day (per 300,000 gpd)	4 lb./ week (per 300,000 gpd)

WASTEWATER TREATMENT PLANTS (Application Rates are based ONLY on volume)

Initial Shock Treatment

- 1st Week = 5 lbs. for every 750,000 gallons every day
- 2nd Week = 5 lbs. for every 750,000 gallons every other day
- 3rd and 4th Week = 5 lbs. for every 750,000 per week.

Maintenance

- Evaluate if the 4th weak dosage is appropriate.
- For dosages dependent not just on volume but also on known values for BOD, COD, TSS, etc., consult with the technical department.

Keep out of reach of children.

IMPORTANT NOTICE TO PURCHASER:

“RootX 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 RootX 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 replacement of the amount of product used to treat the service lateral or mainline at no cost.