

PRODUCT DATA SHEET



16W260 / 16W261

BIOLOGICAL TREATMENT OF DRAIN LINES, SEPTIC SYSTEMS & GREASE TRAPS

FREE FLOW - DRAIN/SEPTIC/GREASE TRAP



340

Tratamiento biológico de desagües, sistemas sépticos y trampas de grasa
Traitement biologique de tuyaux d'évacuation de systèmes septiques et de trappes à graisse



TOUGH GUY - FREE FLOW Drain/Septic/Grease Trap represents the next step in technology for biological treatment of drain lines, grease traps and septic tanks. TOUGH GUY - Free Flow is a new innovative product that contains advanced biotechnology that gives TOUGH GUY- FREE FLOW the ability to degrade the most difficult portion of the grease molecule, the long-chain fatty acids.

GRAINGER is a leader in the marketing of novel microbial formulations for Institutional, Commercial, and Household applications. TOUGH GUY -- FREE FLOW is the result of the selection of novel strains that are combined with stable formulations that assist bacteria in the performance of their natural degradative functions.

The introduction of a new bacillus strain into a microbial blend that also degrades proteins, lipids, carbohydrates and organic waste delivers a unique biological consortium for treating drain lines, grease traps and septic tanks. With regular application, TOUGH GUY - FREE FLOW will reduce trapped grease and grease trap pumping, maintain free-flow in drains, reduce odors in grease traps and drain lines, and accelerate the degradation of organic waste.

BENEFITS

- TOUGH GUY - FREE FLOW contains a blend of microbial species that together degrade grease, short and long-chain fatty acids, proteins, lipids, carbohydrates, and organic waste.
- TOUGH GUY - FREE FLOW does not transfer the grease downstream. The microbial colony actually degrades and digests grease and scum from drain lines and grease traps.
- TOUGH GUY - FREE FLOW proprietary formulation incorporates an innovative inhibitory system that produces excellent product stability, yet upon addition to a drain line or grease trap, these same ingredients stimulate the growth and activity of the bacteria.

- The active ingredients found in TOUGH GUY - FREE FLOW reduce the production of odors by inhibiting biological production of odor causing compounds such as hydrogen sulfide and the rancid, foul-odored, fatty acids that result from septic or anaerobic environments.
- The microbial blend in TOUGH GUY - FREE FLOW controls odors by degrading malodorous volatile fatty acids present in septic or anaerobic environments.
- TOUGH GUY - FREE FLOW specifically degrades long-chain fatty acids that are known to be causing the majority of maintenance and treatment problems.
- The partial breakdown of grease causes pH to drop, creating an environment that hinders most bacteria. TOUGH GUY - FREE FLOW is active at the low pH levels generated. Furthermore, the addition of TOUGH GUY - FREE FLOW alleviates low pH problems by breaking down both short-chain and long-chain fatty acids, thus maintaining an environment more friendly to active microbial degradation.
- TOUGH GUY - FREE FLOW demonstrates visible reductions in grease when field tested in restaurant grease traps.
- TOUGH GUY - FREE FLOW is an environmentally friendly formulation that won't damage pipes and traps.
- As a ready-to-use formulation, TOUGH GUY - FREE FLOW can be applied manually or using an automatic dosing system.
- The microbial colony found in TOUGH GUY - FREE FLOW, excretes high levels of amylase, cellulase, lipase, and protease enzymes, all of which are utilized to degrade long and short chain fatty acids.
- TOUGH GUY - FREE FLOW can be used after septic tank pump out as a stimulus to the germination and outgrowth of a synergistic microbial colony. FREE FLOW™ will improve the septic systems biological stability. Thereafter TOUGH GUY - FREE FLOW Septic, a dry formulation can also be used on a monthly basis.

TOUGH GUY -FREE FLOW is an environmentally friendly product that contains a blend of safe bacillus microorganisms. FREE FLOW has no acute oral toxicity, no acute dermal toxicity and no acute inhalation toxicity.

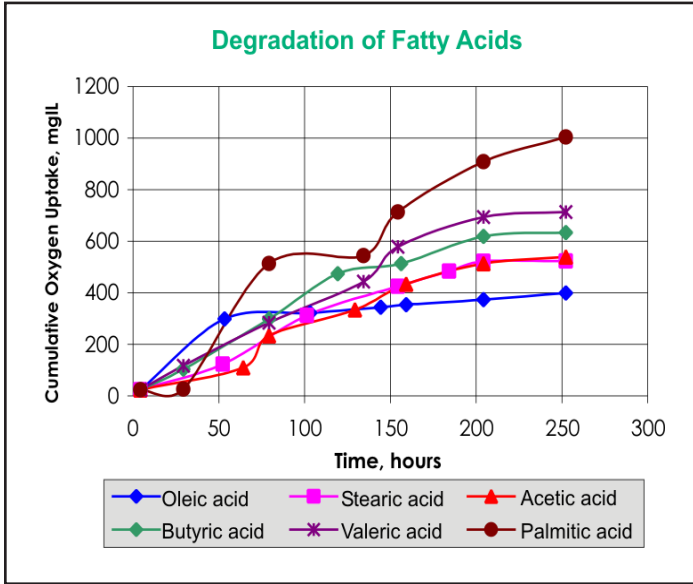


Figure 1. The above graph demonstrates the growth rates of TOUGH GUY - FREE FLOW's microbial colony on various fatty acids. The ability of the microbes found in TOUGH GUY - FREE FLOW to degrade fatty acids of various chain lengths was examined via respirometry on a number of short and long-chain fatty acids. The results demonstrate that TOUGH GUY - FREE FLOW's microbial colony has the ability to degrade both the long-chain, and short-chain fatty acids.

PRODUCT CHARACTERISTICS

- Bacteria count6.6 x10.7 CFU/ml > (200 Billion/gal)
- Bacteria TypeBlend of Bacillus Spores
- Salmonella.....Not detected
- Appearance.....Green liquid
- Fragrance Lemon
- PH range.....8.5 – 8.9
- Shelf Life.....Two years maximum loss of 1.0 log at recommended storage conditions

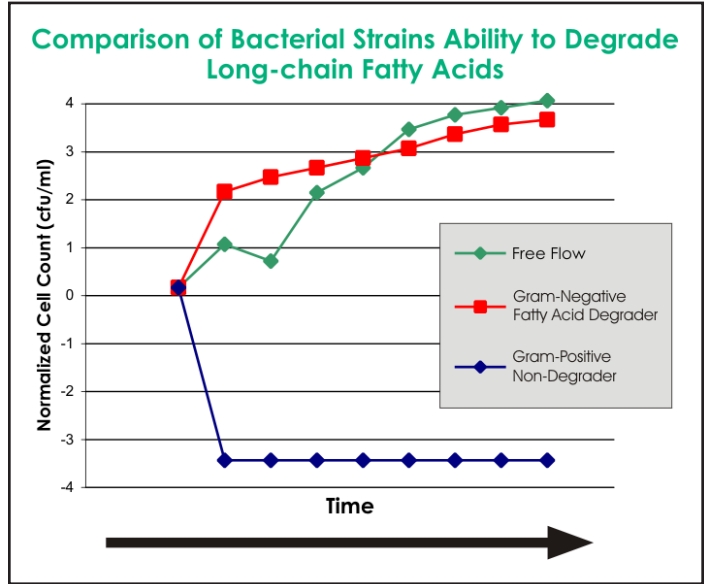


Figure 2. Comparison of the ability of different bacterial strains to degrade and grow on stearic acid, a common long-chain fatty acid. Gram-negatives are known to degrade long-chain fatty acids. The figure demonstrates that the microbial colony found in TOUGH GUY - FREE FLOW grows as well on stearic acid as the Gram-negative strain, which are specifically selected for degradation of long chain fatty acids.

PERFORMANCE CHARACTERISTICS

- Enzyme Production..... Lipase,Protease,Amylase,Cellulase
- Bacterial pathways Aerobic & Facultative Anaerobic
- pH Range5.0 – 9.8
- Temperature range..... 50°F - 145°F (10°C - 63°C)

STORAGE AND HANDLING

Store in closed containers at 50° - 100°F (10° - 40°C). Avoid eye contact. Wash hands thoroughly with warm, soapy water after contact.

AVAILABLE PACKAGING

- 1 gallon jug
- 4 X 1 gallon case
- 5 gallon pail

AVAILABLE THROUGH



FOR THE ONES WHO GET IT DONE

www.grainger.com

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Recommended Application Feed Rate

GREASE TRAPS	
GREASE TRAP SIZE	DOSING
200 gal trap (27ft ³ or 0.8m ³)	10 OZ (300 mL) per day
500 – 1,500 gal trap (67-200 ft ³ or 1.9-5.7m ³)	18 – 20oz (530 – 590 mL) per day
1,500 gal or larger (>200 ft ³ or >5.7m ³)	32 – 40 oz (950 – 1180 mL) per day

DRAINLINES			
DRAIN LINE APPLICATION	FREQUENCY	NOTES	DOSING*
RESIDENTIAL and HOTEL Slow Running Drains	3-day start-up treatment	Run hot water for 30 seconds before dosing product directly into drain. For best results, dose at bedtime or when drain will not be used for several hours.	2-4 oz/day (60-120mL/day)
RESIDENTIAL and HOTEL Maintenance	Ongoing	For best results, dose at bedtime or when drain will not be used for several hours.	2-4 oz/week (60-120mL/wk)
COMMERCIAL Slow Running Drains	7-day start-up treatment	For best results, dose at closing or during quiet hours.	6-8 oz/day (180-240 mL/day)
COMMERCIAL Maintenance	Ongoing	For best results, dose at closing or during quiet hours.	4-8 oz/week (120-240mL/wk)
FLOOR DRAINS	Ongoing	Start-up: Treat drains daily for 3-7 days to achieve better flow rates. Maintenance: dose weekly. For best results, dose at closing or during quiet hours.	Mix 32 oz in 2 gallons water (125 mL/L) to treat 6-8 drains

** Dosing guidelines are recommendations only. Higher dosing rates may be required based on grease loading, types of food cooked and number of meals served. Contact your GeoKleen™ Sales Representative for technical assistance.*

SEPTIC TANKS			
SEPTIC TANK SIZE	FREQUENCY	NOTES	DOSING
1,000 GALLON SEPTIC TANK	After pump out	Use Free Flow™ after tank pump out to stimulate the germination and growth of tank microbe culture.	32 oz per 1,000 Gallon Tank
1,000 GALLON SEPTIC TANK	Ongoing	Can be used monthly or use our dry product, Free Flow Septic.	16 oz per 1,000 Gallon Tank

AVAILABLE THROUGH

GRAINGER®

FOR THE ONES WHO GET IT DONE

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