

March 20, 2008

BIO-MICROBICS, INC.
ALLISON BLODIG
8450 COLE PKWY.
SHAWNEE KS 66227

Re: Description: SEWAGE TREATMENT APPARATUS (also see SEWAGE TANKS)
Manufacturer: BIO-MICROBICS, INC.
Product Name: HighStrength FAST
Model Number(s): 1.0
Product File No: 20080175

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of AUGUST 2013.**

This approval is contingent upon compliance with the following stipulation(s):

- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- This product must be installed in sewage treatment tanks approved by the Department of Commerce, Division of Safety and Buildings for use with this product.
- This unit must be installed in a tank or tanks that comply with the following:
 1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
 2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49-1/2 inches.
 3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 99-1/4 inches.
 4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 1125 gallons.
 5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 750 gallons.
 6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1875 gallons.
 7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
 8. The dimension of the hole in the tank cover is 49 inches by 76-1/4 inches.

When the tank cover suspends the unit, items 9 through 20 must be complied with.

9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.

10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 46-1/2 inches.

11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 39-1/2 inches.

12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.

13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.

14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1350 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 900 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 44 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1350 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 900 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

- Approval is issued for this product because the design of the product meets the intent of s. Comm 83.15 (6), Wis. Adm. Code that requires other types of sewage treatment tanks be constructed in accordance with s. Comm 83.20, Wis. Adm. Code. The intent of the code is met since this product provides an acceptable means of treating wastewater when it is installed in a properly designed tank.
- Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of Total Kjeldal Nitrogen (TKN) up to 70%.
- When this product receives wastewater from commercial or residential applications, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L.
- Any plan submitted to the department for a commercial system that includes a HighStrengthFAST(r) unit shall be accompanied by a letter from Bio-Microbics, Inc. assuring the design will meet required effluent quality.
- When dosing HighStrengthFAST ® units, a dosing schedule that delivers a maximum 1/24th (4.167%) of the design flow rate for the unit in any one hour period is suggested. This schedule also applies to any fraction of an hour.
- The maximum daily wastewater flow which may discharge through this product is 1,000 gallons per day.

This approval supersedes the approval issued on 12/6/2007 under product file number 20070534.

This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number 20070534.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

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