

June 16, 2010 RE-ISSUED 7/6/2010

KNIGHT TREATMENT SYSTEMS  
MARK C NOGA, VP  
281 COUNTY ROUTE 51A  
OSWEGO NY 13126

Re: Description: SEWAGE TREATMENT APPARATUS (Tier 3- downsizing & vertical separation credit)  
Manufacturer: KNIGHT TREATMENT SYSTEMS  
Product Name: WHITE KNIGHT MICROBIAL INOCULATOR/GENERATOR™  
Model Number(s): WK-40 AND WK-78  
THIS APPROVAL AND ITS CONDITIONS ARE LIMITED TO USE & INSTALLATION IN NEW POWTS SYSTEM DESIGNS  
**[WK-40: MAX. DWF 750 GALS./DAY; RESIDENTIAL STRENGTH WASTEWATER; MIN. TANK CAPACITY = 1000 GAL. or 1.5-DAY RESIDENCE TIME WITH 2-DAY RESIDENCE TIME PREFERRED.**  
**WK-78: MAX. DWF 1200 GALS./DAY; RESIDENTIAL STRENGTH WASTEWATER; FOR HIGH STRENGTH WASTEWATER/COMMERCIAL UP TO 1500 MG/L BOD5; MIN. TANK CAPACITY = 2000 GALS. or 1.5-DAY RESIDENCE TIME WITH 2-DAY RESIDENCE TIME PREFERRED; FOR MAX. AVG. F.O.G. SEE STIPULATIONS REGARDING TREATMENT TRAIN]**  
Product File No: 20100070

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 June 2015.**

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

- This product must be utilized in accordance with the manufacturer's printed installation instructions and this product approval. If there is a conflict between the manufacturer's installation instructions and the product approval, the product approval requirements will take precedence.
- **The minimum depth of unsaturated soil for treatment purposes of the treatment/dispersal cell that receives that wastewater from this product must comply with the vertical distance listed in Table 83.44-3 under Fecal Coliform equal to or less than 10,000 cfu/100 ml column heading.**
- A copy of this approval letter and the manufacturer's printed installation instructions must be supplied to the buyer of this product.
- The outlet baffle of the septic tank, which has this product installed, must have installed an effluent filter capable of filtering particles of 1/8 inch in size or larger.
- This product must be installed by a properly licensed plumber.
- A state Sanitary Permit must be obtained when this product is installed.
- The IOS-500 inoculant must be exchanged at least on an annual basis.

KNIGHT TREATMENT SYSTEMS

Page 2

June 16, 2010

Product File No: 20100070

- Prior to installation of this product, plans and specifications must be submitted to the department or to an approved agent municipality for review and approval in accordance with s. Comm 82.20 (1) of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.
- AS OF MARCH 1, 2009 ALL ELECTRICAL CONNECTIONS FOR PRIVATE SEWAGE SYSTEMS MUST COMPLY WITH S. COMM 16.300 WIRING METHODS.
- An access opening of sufficient size to allow installation, inspection maintenance and servicing of this device/product must be provided. This access opening must terminate at or above grade.
- When this product receives wastewater from dwellings, 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 and fecal coliform of less than or equal to 10,000 cfu/100 ml.
- **This approval for the above-referenced PRODUCT FILE No. does not provide for the inclusion of this product in an existing failing POWTS; products to rejuvenate failing POWTS must have separate approval by COMMERCE for chemical or physical restoration (CPR). [s. COMM 83.53].**
- **For commercial use in establishments with food service, full service restaurants, and similar facilities, state-approved upstream grease interceptor of an acceptable size and treatment performance must be installed to bring wastewater parameters to acceptable levels: FOG – 200 mg/L. Tank must allow for min. of 2-day residency time of average DWF with a suggested min. capacity of 1500 gallons.**
- |   |   |
|---|---|
| Table 1 Maintenance, Inspection, Pumping Requirements |   |
| WHITE KNIGHT MICROBIAL INOCULATOR/GENERATOR™          |   |
| PRODUCT/ (Models)                                     | WK 40, WK 78.....   |
| Initial/Startup Inspection/ Maintenance--             | service agreement may be required by manufacturer; replace IOS-500 inoculant annually |
| Ongoing Pumping Cycle And/Or Requirements             | N/A   |
| Back-Wash Cycle                                       | N/A   |
| Effluent Performance Levels                           | NO (NSF Class I)  |
| BOD5 Credit For Downsizing Distribution Area          | YES   |
| Fecal Credit For Reduction Of Vertical Separation     | YES   |
| Additional Comments                                   | N/A   |

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,

Jean M. MacCubbin, CST  
 Engineering Consultant--Plumbing Products Review  
 Commerce; Safety & Buildings Div.  
 PO Box 2658  
 201 W Washington Ave.  
 Madison WI 53703-2658  
 Phone: 608-266-0955; Fax: 608-283-7456  
 E-mail: Jean.MacCubbin@WI.GOV