



Douglas A. Ducey  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera  
Director

## Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF #79505 *Revised 12/15/20*

### 1. Proprietary Treatment Product Name, Model, and Description

Product Name: BioMicrobics

Models: MicroFAST

Description: The BioMicrobics MicroFAST is an aerobic fixed-film process that provides biological treatment. The system contains submerged media that provides a surface for microbial growth. Aeration and circulation is achieved by a blower that pumps air into a draft tube that extends down the center of the system providing the aeration and mixing for the biological process. The system design consists of a two-compartment tank where the first compartment serves as a primary settling zone for incoming sewage and the second houses the MicroFAST treatment unit. Treated effluent, from the MicroFAST unit, is discharged to a leachfield for final disposal. This listing is applicable for design flows less than 3,000 gpd.

### 2. Manufacturer Information

Name: BioMicrobics  
Address: 16002 W. 110<sup>th</sup> St.  
City/State/Zip: Lenexa, KS 66216  
Phone: (913) 422-0707  
Fax: (913) 422-0808  
Website: [www.biomicrobics.com](http://www.biomicrobics.com)

### 3. Recognized Treatment Performance

| Parameter   | Averaging Time              | Parameter Value for Averaging Time |
|---|-----------------------------|------------------------------------|
| 5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/l | 30-day arithmetic mean      | 4 mg/l                             |
| Total Suspended Solids (TSS), mg/l                        | 30-day arithmetic mean      | 5 mg/l                             |
| Total nitrogen as nitrogen(TN), mg/l                      | five-month arithmetic mean  | 17 mg/l                            |
| Total coliform, colony forming units/100ml                | 95 <sup>th</sup> percentile | 300,000 (log <sub>10</sub> 5.5)*   |

\*Default value used due to lack of submitting 3<sup>rd</sup> party test data per R18-9-E315(B).

#### Main Office

1110 West Washington Street • Phoenix, AZ 85007  
(602) 771-2300

#### Southern Regional Office

400 West Congress Street • Suite 433 • Tucson, AZ 85701  
(520) 628-6733

[www.azdeq.gov](http://www.azdeq.gov)

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**4. Product Applicability and Limitations for Use for a Recognized General Permit Technology**

**Applicability:** This listing is only for the BioMicrobics MicroFAST Models (0.5, 0.625, 0.75, 0.9, 1.5, and 3.0) and is listed as an aerobic treatment technology specified in A.A.C. R18-9-E315.

**Limitations:**

**A.** The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).

**B.** The product shall conform to the following:

| Maximum Design Flow<br>(gallons per day)<br>per R18-9-A309(B)(3) | Manufacturer’s Model Number<br>MicroFAST Model | Minimum<br>Settling<br>Zone*<br>(gallons) | Minimum<br>Treatment<br>Zone<br>(gallons) | Minimum<br>Total Tank<br>Volume<br>(gallons) |
|--|--|---|---|--|
| 500  | 0.5  | 500                                       | 750                                       | 1,250  |
| 625  | 0.625  | 625                                       | 938                                       | 1,563  |
| 750  | 0.75   | 750                                       | 1,125                                     | 1,875  |
| 900  | 0.9  | 900                                       | 1,350                                     | 2,250  |
| 1,500  | 1.5  | 1,500                                     | 2,250                                     | 3,750  |
| 2,999  | 3.0  | 3,000                                     | 4,500                                     | 7,500  |

\*Manufacturer recommends a maximum 48-hour retention time for the settling zone.

**C.** This listing EXCLUDES appurtenances which are considered to be an alarm, control panel, control, switch, timer, wiring, other electrical devices, and installation components; which are subject to both the manufacturer specifications and any more restrictive requirement in 18 A.A.C. 9, Article 3.

**D.** This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(42).

**E.** ADEQ does not approve design or operation manuals for proprietary products. However, “if manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer’s specifications” as per R18-9-A312(F)(2) unless a conflict arises as specified in R18-9-A312(F)(4).

**5. Alternative Criteria and Exceptions for Use under the Recognized General Permit Technology**

|                     |   |
|---------------------|---|
| <b>Alternative:</b> | None  |
| <b>Exception:</b>   | <p>a. When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(42), a Manufacturer’s Design Review Report shall be submitted for review and approval along with the Notice of Intent to Discharge. This Design Review Report shall specify component capacities, control settings, and supplemental installation &amp; operational practices.</p> |

**6. Documents Used as the Basis for this Proprietary Treatment Product Listing Notice**

|  |   |
|--|---|
| Application for Treatment Product Listing:     | December 10, 2019<br>Updated June 5, 2020   |
| 3 <sup>rd</sup> Party Test data:               | Wastewater Technology NSF/ANSI Standard 40 – Residential Wastewater Treatment Systems BioMicrobics, Inc.<br><ul style="list-style-type: none"> <li>- MicroFAST 0.5 Wastewater Treatment System (Evaluation under the provisions of NSF/ANSI Standard 40) dated April 2007.</li> <li>- MicroFAST 0.5 Wastewater Treatment System (Evaluation under the provisions of NSF/ANSI Standard 245) dated October 2008.</li> </ul> |
| Installation Instructions:                     | BioMicrobics FAST Installation Manual for use with MicroFAST 0.5, 0.625, 0.75, 0.9, 1.5 (NSF/ANSI STD 40 & 245) Revised September 2016.   |
| Manufacturer’s Warranty:                       | BioMicrobics FAST Owner’s Manual for use with MicroFAST 0.5, 0.625, 0.75, 0.9, 1.5, 3.0 (NSF Std 40 & 245).   |
| Manufacturer’s Specifications:                 | MicroFAST Drawings & Specifications for Models 0.5, 0.625, 0.75, 0.9, and 1.5 Dated 9/18/2013<br>Updated MicroFAST Drawings & Specifications for Models 0.5, 0.625, 0.75, 0.9, 1.5 and 3.0 dated June 2, 2020.  |
| Manufacturer’s Design Calculations & Drawings: | MicroFAST Drawings & Specifications for Model 0.5, 0.625, 0.75, 0.9 and 1.50 Dated 9/18/2013<br>Updated MicroFAST Drawings & Specifications for Models 0.5, 0.625, 0.75, 0.9, 1.5 and 3.0 dated June 2, 2020.   |
| Operation & Maintenance Manual:                | BioMicrobics FAST Owner’s Manual for Models 0.5, 0.625, 0.75, 0.9, 1.5 Revised January 2014.<br>BioMicrobics FAST Service Manual For use with MicroFAST 0.5, 0.625, 0.75, 0.9, 1.5, and 3.0 Revised January 2014.   |

**7. Terms and Conditions for this Proprietary Treatment Product Listing Notice**

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| <p>A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:</p> <ol style="list-style-type: none"> <li>1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;</li> <li>2. Documents used for the basis of this listing are altered or modified;</li> <li>3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;</li> <li>4. The manufacturer requests termination of this listing;</li> <li>5. A listing error or omission is identified; or</li> <li>6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.</li> </ol> <p>B. This Notice of Proprietary Treatment Product Listing does not apply when the:</p> <ol style="list-style-type: none"> <li>1. Listed proprietary treatment product is modified or operated in a manner that conflicts with Arizona law or the documents used for the basis of this listing action in Section 6.</li> </ol> |
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2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.
- C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1 above.
- D. The manufacturer is responsible for notifying ADEQ of changes to the contact information at the following address:  
Attention: Product Listing Supervisor  
Engineering Review Desk,  
1110 West Washington Street  
Phoenix, AZ 85007.
- E. The listing by ADEQ of any proprietary product or service is not an endorsement by ADEQ or the State of Arizona. ADEQ does not endorse, represent, guarantee, warranty or defend the use of any product which is authorized for use pursuant to A.A.C. R18-9-A309(E). Product providers are a direct source unrelated to ADEQ or the State of Arizona. Use of any listed product is at the user's risk and the State assumes no liability.

|                   |   |                     |            |
|-------------------|---|---------------------|------------|
| <b>Signature:</b> | <i>Naveen Savarirayan</i><br>Naveen Savarirayan | <b>Date Signed:</b> | 12/17/2020 |
|-------------------|---|---------------------|------------|

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| <b>Title:</b> | Section Manager, Groundwater Protection Value Stream |
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ADEQ LTF # - 79505

Reviewers: LAL & RDM

Revised: December 15, 2020