



Janice K. Brewer  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Henry R. Darwin  
Director

## Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E)

### ADEQ File No. 20100103

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

Product Name: AdvanTex<sup>®</sup> Treatment System  
 Model: AX20-RT-Mode 1B & AX20-RT-Mode 3B  
 Description: The AX20-RT Treatment System consists of a single tank with self-contained multi compartment unit that treats septic tank effluent. It also contains engineered textile media filter module; recirculation pump and recirculation-splitter baffle; and related appurtenances described in Section 4 herein. The system is designed only for single family residence up to four bedrooms or 600 gpd design flow.

Product Name: AdvanTex<sup>®</sup> Treatment System

#### 2. Manufacturer Information

Name: Orenco Systems Inc.  
 Address: 814 Airway Ave  
 City/State/Zip: Sutherlin, OR 97479  
 Phone: 1-800-348-9843  
 Fax: 541-459-2884  
 Website: [www.orenco.com](http://www.orenco.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	15
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	15
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	30 <sup>1</sup>
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	15 <sup>2</sup>
Total coliform, colony forming units/100ml	95th percentile	100,000

#### NOTES:

<sup>1</sup> Treatment performance for AX20-RT Mode 1B is based on the testing results for AX20 Mode 1.

Northern Regional Office  
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001  
(928) 779-0313

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

<sup>2</sup> Treatment performance for AX20-RT Mode3B Based on the testing results for AX20 Mode 3, the five-month arithmetic mean of total nitrogen in raw wastewater (influent) not exceeding 53 mg/L. Total N value of 15 mg/l is recognized treatment performance satisfying the data submittal requirement of A.A.C. R18-9-E312(C)(4) for the approved AX20 Mode 3.

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

**Applicability:** This listing is for pump discharge only for the treatment technology specified in A.A.C. R18-9-E312(B) & R18-9-A312(B)(4)(e).

**Limitations:**

- A. The product is only for residential use for single family residences up to four bedrooms or 600 gpd and subject to A.A.C. R18-9-A312(F)(2) through (4).
- B. No gravity discharge is allowed.
- C. The AdvanTex<sup>®</sup> AX20-RT treatment system shall conform to the following:

Maximum Treatment System Design Flow (gallons per day)	Minimum Recirculation Capacity of the AX20-RT tank (gallons)	Number of AX20-RT Filter Modules	Tank Specifications	Minimum Storage Capacity Above High Operating Level (gallons) (see NOTE B.1)	Treatment Product Appurtenances (See Note B.2 & B.3))
600	800	1	AdvanTex <sup>®</sup> AX20 General Specifications, total of 17 pages, dated December 2008.	700	The AdvanTex <sup>®</sup> Design Criteria, total 4 pages, dated August, 2010.

**NOTES:**

B.1 – A.A.C. R18-9-A312(B)(4)(e).

B.2 – Appurtenances for this Treatment Product Listing INCLUDE the Biotube assembly, recirculation pump, recirculation-splitter baffle, and interconnecting piping. This listing EXCLUDES appurtenances which are considered to be “other manufactured materials and components” such as 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.

B.3 – Septic tank preceding AX20-RT should be designed per R18-9-A314.

D. Nominal hydraulic application rate is not more than 35.0 gpd/ft<sup>2</sup> of textile filter inlet surface at the rated daily design flow.

E. Nominal recirculation ratio for the system is 4:1.

F. Treated wastewater from the listed product shall be delivered to a disposal works which conforms to R18-9-A312(C) through (F), R18-9-A313, and the applicable criteria in 18 A.A.C, Article 3, Part E for the selected disposal technology.

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

<b>Alternative:</b>	None
<b>Exception:</b>	None

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

Application for Treatment Product Listing:	Dated 04/28/10, total of 2 pages plus attachments <b>(NOTE 1)</b> . Dated 03/08/11, total of 2 pages.
Specifications:	AdvanTex <sup>®</sup> AX20, General Specifications, total of 17 pages, dated December 2008.
System components:	Installation Manual, Page 3 on 01/2010.
Manufacturer's Design Criteria	Dated August 2010, total of 4 pages <b>(NOTE 1)</b> .
Manufacturer's Installation Manual:	Dated January 2010, total of 16 pages <b>(NOTE 1)</b> .
Manufacturer's Operation and Maintenance Manual:	O&M Manual, dated January 2010, total of 3 pages <b>(NOTE 1)</b> .
Manufacturer's Warranty:	Dated August, 2010, 1 page <b>(NOTE 1)</b> .
Third party test data accepted for recognized treatment performance:	Since AX-20 and AX20-RT have same treatment technology specified in R18-9-E312, data used for AX-20 listing are also used for AX20-RT. Default treatment performance values are recognized in Section 3 on page 1 of this Notice based on A.A.C. R18-9-E312(B) for BOD <sub>5</sub> , TSS, and Total Coliform. Default treatment is recognized for TN in Section 3 of this Notice for the AX20 Mode 1. Superior treatment is recognized for TN in Section 3 on page 1 of this Notice for the AX20 Mode 3 is based on NSF-40 testing accepted by ADEQ
<b>NOTE 1</b> – Document is an integral part of this Proprietary Treatment Product Listing Notice and is included in the Arizona Department of Environmental Quality website at: <a href="http://azdeq.gov/engineeringreview/product.html">http://azdeq.gov/engineeringreview/product.html</a>	

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

- A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:
  - i. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;
  - ii. Documents used for the basis of this listing are altered or modified;
  - iii. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;
  - iv. The manufacturer requests termination of this listing;
  - v. A listing error or omission is identified; or
  - vi. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.
- B. This Notice of Proprietary Treatment Product Listing does not apply when the:
  - i. 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.
  - ii. Listed proprietary treatment products 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 the ADEQ of changes to 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>		<b>Date Signed:</b>	4/19/11
<b>Title:</b>	Director, Water Quality Division		

**Note 1 Documentation Package for**  
Notice of Proprietary Treatment Product Listing  
Pursuant to Arizona Administrative Code R18-9-A309(E)  
Orenco Systems Inc., AdvanTex<sup>®</sup> - AX20-RT Mode 1B & Mode 3B  
Treatment System

- A. Application for Treatment Product Listing: 2 pages
- B. Design Criteria: 4 pages
- C. Manufacturer's Installation Guide: 16 pages
- D. Manufacturer's Operation and Maintenance Manual: 3 pages
- E. Manufacturer's Warranty: 1 page
- F. Homeowner's Manual: 6 pages (same as AX-20 Manual)

ERP: 11-76  
ADEQ File Number: 20100103  
Reviewer: TF1