



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Douglas A. Ducey
Governor

Misael Cabrera
Director

Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) LTF No#:65735

1. Proprietary Treatment Product Name, Model, and Description

Product Name: AdvanTex® Textile Media Filter
 Model: AX20 Mode 1, AX20 Mode 3, AX20-RT Mode 1 & AX20-RT Mode 3
 Description: The Models are recirculating packed bed filters that are comprised of recirculation tank, engineered textile filter module; recirculation pump, recirculation-splitter baffle; and related appurtenances described in Section 4 herein. The Model AX20 is designed for residential wastewater design flow up to 3,000 gpd and Model AX20-RT for residential wastewater flow up to 600 gpd.

2. Manufacturer Information

Name: Orenco Systems Inc.
 Address: 814 Airway Ave
 City/State/Zip: Sutherlin, OR 97479
 Phone: 1-800-230-9580
 Fax: 541-459-4449
 Website: www.orenco.com

3. Recognized Treatment Performance

Parameter	Averaging Time	Parameter Value for Averaging Time
5-Day Biochemical Oxygen Demand (BOD ₅), mg/l	30-day arithmetic mean	7
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	3
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	30 ¹
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	15 ²
Total coliform, colony forming units/100ml	95th percentile	100,000

NOTES:

¹ Treatment performance is based on the testing results for AX20-RT Mode 1.

² Treatment performance is 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 the Textile Filter treatment technology specified in A.A.C. R18-9-E312(B).

Limitations:

A. The Model AdvanTex® AX20 Model 1 and Mode 3 are for residential design flow up to 3,000 gpd and AX20-RT Model 1 and Mode 3 are only for residential design flow up to 600 gpd. These are subject to A.A.C. R18-9-A312(F)(2) through (4).

B. The AdvanTex® AX20 Mode 1 and Mode 3 treatment systems shall conform to the following:

Maximum Treatment System Design Flow (gallons per day) (see NOTE B.1)	Number of AX20 Filter Modules	Processing Tank with Primary and Secondary Compartments		Treatment Product Appurtenances (See Note B.2)
		Minimum Operational Liquid Capacity (gallons)	Minimum Storage Capacity Above High Operating Level (gallons)	
600	1	1,500	Orenco Systems® Incorporated AdvanTex® - AX20 Design Criteria, total of 5 pages, dated March, 2012	Orenco Systems® Incorporated AdvanTex® - AX20 Technical data sheet, 1 page, dated August, 2014
>600 to 1,200	2	3,000		
>1,200 to 1,800	3	4,500		
>1,800 to 2,400	4	6,000		
>2,400 to 3,000	5	7,500		

NOTES:

B.1 – Residential design flow per A.A.C. R18-9-A314(4)(a)(i)

B.2 – Appurtenances for this Treatment Product Listing include the Biotube assembly, recirculation pump, recirculation splitter valve, 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.

C. The AdvanTex® AX20-RT Mode 1 and Mode 3 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® - AX20-RT Design Criteria, total of 6 pages, dated January, 2016	700	AdvanTex® - AX20-RT Technical data sheet, 2 pages, dated August, 2014

NOTES:

C.1 – Septic tank preceding AX20-RT shall be designed per R18-9-A314(a)(i).

C.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.

D. Nominal hydraulic application rate is not more than 25.0 gpd/ft² of textile filter inlet surface at the rated daily design flow.

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

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


Alternative:	None
Exception:	None

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

Application for Treatment Product Listing:	Dated 03/16/17
Specifications:	AdvanTex® -AX20 Technical data sheet, 1 page, dated August, 2014 AX20-RT Technical data sheet, dated, August, 2014
System components:	AdvanTex® -AX20 Technical data sheet, 1 page, dated August, 2014 AX20-RT Technical data sheet, 2 pages, dated, August, 2014
Manufacturer's Design Criteria	AX20 Design Criteria, total of 5 pages, dated March, 2012 AX20-RT Design Criteria, total of 6 pages, dated January, 2016
Manufacturer's Installation Manual:	AX20 Total of 13 pages, dated April, 2016 AX20-RT Total of 16 pages, dated September, 2016
Manufacturer's Operation and Maintenance Manual:	O&M Manual, Part 1, March, 2014, total of 28 pages O&M Manual, Part 2, September, 2016, total of 20 pages
Manufacturer's Warranty:	Extended 3 -year limited Warranty for Residential Application, Dated August, 2011, 1 page
Third party test data accepted for recognized treatment performance:	Since AX-20 and AX20-RT have same treatment technology specified in R18-9-E312, testing data for AX20-RT are also used for AX20. Better 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 ₅ and TSS. Default treatment is recognized for TN in Section 3 of this Notice for Mode 1 of the AX20 and AX20-RT. Superior treatment is recognized for TN of this Notice is based on NSF-245 testing for the AX20 Mode 3 accepted previously by ADEQ.

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.

Signature: 	Date Signed: <i>May 9, 2017</i>
Title:	David Lelsz, Unit Manager, GWMEU, Water Quality Division

ADEQ LTF #65735
Reviewer: Tanveer Faiz, P.E.

