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March 19, 2021

## ADDENDUM NUMBER 2

**Bid Number 00001614**

### ANKENY PUMP STATION ODOR TREATMENT SYSTEM REHAB

**Bids Due: April 1 by 2:00 P.M.**

This addendum provides changes to the plans and specifications for the above-entitled project to be considered by each bidder. This addendum shall be included in the bid and, when closing the contract, will be a part thereof. Any changes made by this addendum to said plans and specifications offset only the portion of the plans, words or paragraphs specifically mentioned herein, and the balance of the plans and/or specifications remain in full force. It is the responsibility of all bidders to conform to this addendum.

Item No.	Location	Change
2.01	Bid Due Date	<b>DELETE</b> March 25 by 2:00 P.M and <b>REPLACE</b> with April 1 by 2:00 P.M
2.02	TOC	<b>ADD</b> the following: <ul style="list-style-type: none"><li>• Section 01 73 23: Structural Design and Anchorage Requirements for Nonstructural Components and nonbuilding structures.</li><li>• Appendix F Existing Biosorben Media MSDS. See attached.</li></ul>
2.03	Specification Section 05 52 00	<b>DELETE</b> Section 2.08.J and 2.08 K and <b>REPLACE</b> with the following:  J. Nonwelded Connections: Connect members with mechanical fasteners and fittings. Either interior or exterior fasteners are acceptable.  K. Form changes in direction by using prefabricated elbow fittings.
2.04	Specification Section 40 91 23	Section 2.11 C.2 and Section 2.14 A.2



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		<b>DELETE</b> insulated vessel and <b>REPLACE</b> with non-insulated vessel
2.05		<p><b>Question:</b></p> <ul style="list-style-type: none"> <li>• Is the adsorber insulated?</li> <li>• Does it have an internal sloped bottom?</li> <li>• Does the unit need to be shipped in sections to allow the unit to fit through the opening? Please confirm.</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>• The vessel is non-insulated vessel.</li> <li>• The bottom is sloped requirement is listed on specification section 44 31 19 - 2.08.O</li> <li>• Fitting requirements and leak test are listed in section 44 31 19-2.08. J</li> </ul>
2.06		<p><b>Question:</b> Can contractors put a larger hole in the top of the vault to allow for the completely assembled unit?</p> <p><b>Answer:</b> The access hatches to the underground vaults can not be enlarged.</p>

**END OF ADDENDUM**

Please direct all questions and concerns to Kelly Davis-McKernan , at [kelly.davis-mckernan@portlandoregon.gov](mailto:kelly.davis-mckernan@portlandoregon.gov).

Sincerely,



Kathleen Brenes-Morúa  
Interim Chief Procurement Officer  
kbm:buyer initials

## SECTION 01 73 23

### STRUCTURAL DESIGN AND ANCHORAGE REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS AND NONBUILDING STRUCTURES

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. This section specifies the minimum structural requirements for the design, anchorage and bracing of architectural/mechanical/HVAC/odor control/electrical components, equipment, and systems, and nonbuilding structures. Design of supports, attachments and bracing for all parts or elements of the architectural, mechanical, HVAC, odor control and electrical systems shall be provided in accordance with this section. The requirements of this section shall apply to the design of the structural elements and features of equipment and to platforms/walkways, stairs and ladders that are provided with equipment or nonbuilding structures.
- B. This section applies to nonstructural components that are permanently attached to structures, and nonbuilding structures as defined below in paragraph 1.01-B and ASCE 7-16. Note that equipment is defined as a non-structural component and tanks are defined as a nonbuilding structure.
- C. Design shall be in accordance with the criteria listed within this section and shall conform to the provisions of the design codes listed within this section. Engineering design is not required for attachments, anchorage, or bracing detailed on the drawings or where the size of attachments, anchorage, or bracing is defined in the technical specification sections.
- D. The following nonstructural components are exempt from the seismic design loading requirements of this section for this project classified as Seismic Design Category D:
  1. Mechanical and electrical components where the component importance factor,  $I_p$ , is equal to 1.0 **and both** of the following conditions apply:
    - a. Flexible connections between the components and associated ductwork, piping and conduit are provided, and
    - b. Components are mounted at 4 ft or less above a floor level and weigh 400 lb or less (4 ft criteria applies to the mounting support elevation relative to the floor).
  2. Mechanical and electrical components where the component importance factor,  $I_p$ , is equal to 1.0 **and both** of the following conditions apply:
    - a. Flexible connections between the components and associated ductwork, piping and conduit are provided, and
    - b. The components weigh 20 lb or less or, for distribution systems, weighing 5 lb/ft or less.

## 1.02 DEFINITIONS

- A. **STRUCTURES:** The structural elements of a building that resist gravity, seismic, wind, and other types of loads. Structural components include columns, posts, beams, girders, joists, bracing, slabs or decking, load-bearing walls, and foundations.
- B. **NONSTRUCTURAL COMPONENTS:** The nonstructural portions of a building include every part of the building and all its contents, except the structural portions, that carry gravity loads and that may also be required to resist the effects of wind, snow, impact, temperature and seismic loads. Nonstructural components include, but are not limited to, ceilings, partitions, fire barrier walls, windows, equipment, piping, ductwork, furnishings, lights, etc.
- C. **NONBUILDING STRUCTURES:** All self-supporting structures that carry gravity loads and that may also be required to resist the effects of wind, snow, impact, temperature and seismic loads. Nonbuilding structures include, but are not limited to, pipe racks, storage racks, stacks, caissons, tanks, vessels and structural towers that support tanks and vessels.

## 1.03 QUALITY CONTROL:

- A. Special Inspection of nonstructural components and nonbuilding structures, and their anchorages shall be performed by the Special Inspector under contract with the Owner's Representative and in conformance with OSSC Chapter 17. Special Inspector(s) and laboratory shall be acceptable to the Owner's Representative in their sole discretion. Special Inspection is in addition to, but not replacing, other inspections and quality control requirements herein. Where sampling and testing required herein conforms to Special Inspection standards, such sampling and testing need not be duplicated.

## 1.04 REFERNECES:

- A. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly.
- B. Unless otherwise specified, references to documents shall mean the documents in effect at the time of Advertisement for Bids or Invitation to Bid (or on the effective date of the Agreement if there were no Bids). If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization, or if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued, or replaced. When conflicting requirements occur, the most stringent requirements will govern the design.

Reference	Title
AAMA	American Architectural Manufacturer's Association
ACI 318	2014 Building Code Requirements for Structural Concrete
ACI 350	2006 Code Requirements for Environmental Engineering Concrete Structures
TSM 402	2016 Building Code Requirements for Masonry Structures
AISC 341	2005 Seismic Provisions for Structural Steel Buildings
AISC 360	2005 Specification for Structural Steel Buildings
ASCE 7	2016 Minimum Design Loads for Buildings and Other Structures
ASTM C635	Standard Specification for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
ASTM C636	Standard Practice for Installation for Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
AWS D1.1	Structural Welding Code – Steel
AWS D1.2	Structural Welding Code - Aluminum
AWS D1.6	Structural Welding Code – Stainless Steel
IBC	2018 International Building Code
Aluminum Design Manual	The Aluminum Association, Aluminum Design Manual with Specifications and Guidelines for Aluminum Structures, 2015.
NFPA-13	Standard for the Installation of Sprinkler Systems
OSHA	U.S. Dept. of Labor, Occupational Safety and Health Administration
OSSC	2019 Oregon Structural Specialty Code (based on 2018 IBC)
SMACNA	Seismic Restraint Manual Guidelines for Mechanical Systems

## 1.05 SUBMITTALS

- A. For structural elements of nonstructural components and nonbuilding structures required to be designed per this specification section, drawings and design calculations shall be stamped by an Oregon licensed professional engineer qualified to perform structural engineering.
- B. Submit drawings and calculations no less than four weeks in advance of the installation of any component to be anchored to the structure or installation of any structural member to which the component will be attached.
- C. The following submittals shall be provided in accordance with Section 01 33 00:
  1. A copy of the applicable specification section, with addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. A check mark (√) shall denote full compliance with a paragraph as

a whole. If deviations from the specifications are indicated, and therefore requested by the Contractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph, referenced to a detailed written explanation of the reasons for requesting the deviation. The Owner's Representative shall be the final authority for determining acceptability of requested deviations. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications. *Failure to include a copy of the marked up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.*

2. Certificate of Compliance for each Contractor Designed and engineered bracing system, signed and sealed by a Professional Engineer registered in the state of Oregon. Certification shall state that the component's support and anchorage systems are designed to withstand the required forces and displacements in accordance with this section and contain sealed calculations.
3. List of all nonstructural components and nonbuilding structures requiring wind and seismic design and anchorage.
4. Shop drawings showing details of complete wind and seismic bracing and anchorage attachment assemblies including connection hardware, and embedment into concrete.
5. Shop drawings showing plans, elevations, sections and details of equipment support structures and nonbuilding structures, including anchor bolts, structural members, platforms, stairs, ladders, and related attachments.
6. Identify all interface points with supporting structures or foundations, as well as the size, location, and grip of all required attachments and anchor bolts. Clearly indicate who will be providing each type of attachment/anchor bolt. Equipment vendor shall design anchor bolts, including embedment into concrete, and submit stamped calculations.
7. Calculations for all supports, bracing, and attachments shall clearly indicate the design criteria applied in the design calculations. Concrete embedment calculations shall be coordinated with thickness and strength of concrete members. Submit a tabulation of the magnitude of unfactored (service level) equipment loads at each support point, broken down by type of loading (dead, live, wind, seismic, etc.). Indicate impact factors applied to these loads in the design calculations.
8. Product Data: Manufacturer's certificates of compliance with the seismic force requirements of this section.

## 1.06 DESIGN CODES

- A. The following standard codes have application at this site for:

Buildings/Structures:	OSSC 2019 (based on IBC 2018) and ASCE 7-05
Reinforced concrete:	ACI 350-06 for Concrete Liquid Containing Tanks, ACI 318-14 for all other reinforced concrete
Structural steel:	AISC 360-16 and AISC 341-16
Aluminum:	The Aluminum Association, Aluminum Design Manual with Specifications and Guidelines for Aluminum Structures, 2015.
Welding:	AWS Welding Codes, Latest Edition
Occupational health and safety requirements:	U.S. Dept. of Labor, Occupational Safety and Health Administration (OSHA)

- B. When conflicting requirements occur, the most stringent requirements will govern the design.

#### 1.07 DESIGN LOADS

All nonstructural components and nonbuilding structures shall be designed for the following loads. Wind and snow loads shall not be applied to nonstructural components and nonbuilding structures that are located inside buildings.

- A. Dead Loads:

1. An additional allowance of 20 psf shall be added for piping and conduit when supported and hung from the underside of equipment and platforms.

- B. Uniform Live Loads:

Elevated grating floors:	100 psf
Columns:	No column live load reduction allowed
Stairs and landings:	100 psf
Equipment platforms, walkways/catwalks (other than exitways):	60 psf + 10 psf collateral live load

- C. Snow Loads:

Minimum Roof Snow Load:	25 psf
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- D. Wind Loads:

Basic Wind Speed (3-second gust):	95 mph
Exposure:	C
Topographic Factor ( $K_{zt}$ )	1.0
Importance Factor (I):	1.15 (Wastewater Treatment facilities are Occupancy Category III)

1. All exterior nonstructural components and nonbuilding structures, unless located in a pit or basin, shall be designed to withstand the design wind loads without consideration of shielding effects by other structures.

E. Seismic Loads:

0.2 Sec. Mapped Spectral Response, $S_S$ :	0.883 g
1.0 Sec. Mapped Spectral Response, $S_I$ :	0.394 g
Site Class:	D
0.2 Sec. Design Spectral Response, $S_{DS}$ :	0.675 g
1.0 Sec. Design Spectral Response, $S_{DI}$ :	0.501g
Importance Factor (I):	1.25 (Wastewater Treatment facilities are Occupancy Category III)
Component Importance Factor ( $I_p$ ):	1.0, except $I_p=1.5$ for fire protection sprinkler systems or components containing hazardous materials
Seismic Design Category	D

1. Seismic loads shall be calculated on the basis of the governing building code. The structure dead load shall include equipment operating loads.
2. Individual members shall be checked for seismic and full member live load acting simultaneously, except that flooded equipment loads (infrequent occurrence) need not be combined with seismic loads. Equipment operating loads shall be combined with seismic loads.
3.  $S_{DI}$  was developed using code based methods using ASCE 7-16, Table 11.4-2, a site response analysis was not performed. Therefore, the modifications to  $C_s$  (seismic response coefficient determined in Section 12.8.1.1) provided in ASCE 7-16, Section 11.4.8, Exception 2 must be used.

F. Impact Loads:

1. Impact loads shall be considered in the design of support systems.
2. The following impact load factors shall be used unless recommendations of the equipment manufacturer will cause a more severe load case.

Rotating machinery:	20% of moving load
Reciprocating machinery:	50% of moving load
Monorail Hoists:	
Vertical	25% of lifted load
Longitudinal	10% of lifted load
Hangers supporting floors and platforms:	33% of live and dead load



G. Temperature:

1. The effects of temperature shall be included in design where nonstructural components and nonbuilding structures are exposed to differential climatic conditions. See Section 1.07 for temperature extremes.

1.08 LOAD COMBINATIONS

- A. All nonstructural components and nonbuilding structures shall be designed to withstand the load combinations as specified in the governing building code. Where the exclusion of live load or impact load would cause a more severe load condition for the member under investigation, then the load shall be ignored when evaluating that member.

1.09 DESIGN CONSIDERATIONS

All nonstructural components and nonbuilding structures shall be designed for the following conditions:

A. Climatic Conditions:

Maximum design temperature:	110 degrees Fahrenheit
Minimum design temperature:	10 degrees Fahrenheit

B. Foundations:

1. Foundations supporting nonstructural components and nonbuilding structures shall extend below the frost line, or be supported on non-frost susceptible structural fill down to the frost line.

Frost line for foundations:	12 inches
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2. Consult project geotechnical report for allowable soil bearing recommendations at location of structure.

1.10 COLUMN BASE FIXITY

- A. Column bases shall be designed as pinned connections. No moments shall be assumed to be transferred to the foundations.
- B. Where significant shear loads (greater than 5,000 lb. per anchor bolt) are transferred at column base plates, the equipment vendor shall provide a shear key.

1.11 DEFLECTIONS

- A. Maximum beam deflections as a fraction of span for walkways and platforms shall be  $L/240$  for total load and  $L/360$  for live load. Maximum total load deflection for equipment supports shall be  $L/450$ .

## **PART 2 - PRODUCTS**

### **2.01 GENERAL**

- A. Materials shall be in conformance with information shown on the drawings and in other technical specification sections. See individual component and equipment specifications for additional requirements.

## **PART 3 - EXECUTION**

### **3.01 GENERAL**

- A. Attachments and braces shall be made in such a manner that the component force is transferred to the lateral force-resisting system of the structure. Attachment requirements and size and number of braces shall be based on the calculations submitted by the Contractor.
- B. All anchorage of equipment is specified to be made by cast-in anchor bolts in concrete elements unless specifically noted otherwise on the drawings or other specification Sections. Contractor shall be responsible for any remedial work or strengthening of concrete elements because of superimposed seismic loading if anchor bolts are improperly installed or omitted due to lack of submittal review or improper placement for any reason, at no additional cost to the Owner.
- C. Anchor bolts shall be provided and installed by the Contractor in accordance with Section 03 15 19. Size of anchor bolts and embedment of anchor bolts shall be based on the calculations submitted by the Contractor.
- D. Details of and calculations for all anchorages shall be submitted and accepted in accordance with paragraph 1.03 prior to placement of concrete or erection of other structural supporting members. Submittals received after structural supports are in place will be rejected if proposed anchorage method would create an overstressed condition of the supporting member. The Contractor shall be responsible for revisions to the anchorages and/or strengthening of the structural support so that there is no overstressed condition at no additional cost to the Owner.

**END OF SECTION**



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## MATERIAL SAFETY DATA SHEET Biofilter BIOSORBENS™ Media

### SECTION 1 – Chemical Product and Company Identification

MSDS Name – Biofilter Media

Synonyms:

Company Identification: BIOREM Technologies Inc.  
7496 Wellington Road 34  
Guelph, ON N1H 6H9  
For information, call: (519) 767-9100

### SECTION 2 – Composition, Information on Ingredients

CAS #	Chemical Name	%	EINECS #
	Coated low density aggregate	75-100	
	Organic compost blend	0-25	

### SECTION 3 – Hazards Identification

Appearance: Grey to black coloured solid. Asymmetrical spherical solids ranging from 1mm to 20mm in diameter.

WARNING! This is considered to be of low hazard in normal industrial handling.

Target Organs: None.

#### Potential Health Effects

Eye: Dust may cause irritation.

Skin: Excessive contact with skin may cause irritation. Various species of wood and wood dust can elicit allergic contact dermatitis in sensitized individuals.

Ingestion: No hazard expected in normal industrial use.

Inhalation: No hazard expected in normal industrial use. Excessive inhalation may cause nasal dryness, irritation and obstruction.

Chronic: No information found.



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## **SECTION 4 - First Aid Measures**

- Eyes:** Immediately flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. If irritation continues, seek medical help.
- Skin:** Immediately flush with plenty of soap and water for at least 15 minutes. If rash develops or irritation persists, seek medical attention.
- Ingestion:** If large amounts of product ingested, do NOT induce vomiting. Seek medical help.
- Inhalation:** Remove from exposure to fresh air. If persistent coughing or breathing difficulties, seek medical attention.
- Notes to Physician:** Treat symptomatically and supportively.

## **SECTION 5 – Fire Fighting Measures**

- General Information:** As in any fire, wear a self-contained breathing apparatus (SCBA) in a pressure-demand.
- Extinguishing Media:** Use water spray, dry chemical or carbon dioxide.
- Autoignition Temperature:** Not available.
- Flash Point:** Not available.
- NFPA Rating:** Not published.
- Explosion Limits, Lower:** Not available.
- Upper:** Not available.

## **SECTION 6 – Accidental Release Measures**

- General Information:** Use proper personal protective equipment as indicated in Section 8.



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Spills/Leaks: Sweep up, then place into a suitable container for disposal.  
Avoid generating dusty conditions.

## SECTION 7 – Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin or in the eyes. Do not ingest or inhale. Wash hands before eating.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## SECTION 8 – Exposure Controls, Personal Protection

Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

Chemical Name	ACGIH	NIOSH	OSHA – Final PELs
Biofilter Media	None listed	None listed	Dust, 5 mg/m <sup>3</sup> TWA; 10 mg/m <sup>3</sup> STEL

OSHA Vacated PELs: No OSHA Vacated PELs are listed for any of the chemicals

### Personal Protective Equipment:

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin: Wear puncture resistant gloves. Wear natural rubber apron and/or clothing.

Clothing: Wear appropriate protective gloves and clothing to prevent skin exposure.



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**Respirators:** Follow the OSHA respirator regulations found in 29CFR 1910.134.  
Always use a NIOSH-approved respirator when necessary.

## **SECTION 9 – Physical and Chemical Properties**

Physical State:	Solid
Appearance:	Dark brown to black
Odour:	Mild earthy or musty smell
pH:	6.0 to 10.0
Vapour Pressure:	Not applicable
Vapour Density:	Not applicable
Evaporation Rate:	Negligible
Viscosity:	Not applicable
Boiling Point:	Not applicable
Freezing/Melting Point:	Not applicable
Decomposition Temperature:	Not applicable
Solubility:	0% in water at 20 deg C
Specific Gravity/Density:	40 to 70 lbs/ft <sup>3</sup>

## **SECTION 10 – Stability and Reactivity**

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Entry into a closed vessel should follow Confined space entry procedures. Oxygen may be deficient.
Incompatibilities with Other Materials:	Avoid contact with oxidizing agents and drying oils.
Hazardous Decomposition Products:	Thermal oxidative degradation of wood may



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produce irritating and toxic fumes and gases, including carbon monoxide, aldehydes and organic acids.

Hazardous Polymerization: Has not been reported.

## SECTION 11 – Toxicological Information

RTECS#: CAS#  
LD50/LC50: None available.  
Carcinogenicity: Biofilter media - not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Neurotoxicity: No information available.  
Mutagenicity: No information available.  
Other Studies None.

## SECTION 12 – Ecological Information

Ecotoxicity: No information available.  
Environmental Fate: No information reported.  
Physical/Chemical: No information available.  
Other: No information available.

## SECTION 13 – Disposal Considerations

Dispose of in a manner consistent with federal, state and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: Not listed.

RCRA D-Series Chronic Toxicity Reference Levels: Not listed.



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RCRA F-Series	Not listed.
RDRA P-Series:	Not listed.
RCRA U-Series:	Not listed.

Not listed as a material banned from land disposal according to RCRA.

## **SECTION 14 – Transport Information**

US DOT	No information available
IMO:	Not regulated as a hazardous material.
IATA:	Not regulated as a hazardous material.
RID/ADR:	Not regulated as a hazardous material.
Canadian TDG:	No information.

## **SECTION 15 – Regulatory Information**

### **US FEDERAL:**

TSCA	Biofilter media is not on the TSCA Inventory.
Health and Safety Reporting List:	Not on the Health and Safety Reporting List.
Chemical Test Rules:	Not under a Chemical Test Rule
Section 12b:	Not listed under TSCA Section 12b
TSCA Significant New Use Rule:	Nothing in this material has a SNUR under TSCA.

### **SARA**

Section 302 (RQ):	Nothing in this material has an RQ.
Section 302 (TPQ):	Nothing in this product has a TPQ.
Section 313:	Not reportable under Section 313.





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Clean Air Act:	This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:	None of the chemicals in this product are listed as Hazardous Substances under the CWA None of the chemicals in this product are listed as Priority Pollutants under the CWA None of the chemicals in this product are listed as Toxic Pollutants under the CWA
OSHA:	None of the chemicals in this product are considered highly hazardous by OSHA.
US STATE:	Not present on state lists from CA, PA, MN, MA, FL, or NJ. California No Significant Risk Level: Nothing in this product is listed.

## **EUROPEAN/INTERNATIONAL REGULATIONS:**

European Labeling in Accordance with EC Directives

Hazard Symbols:	Not available
Risk Phrases:	R36/38 Irritating to eyes
Safety Phrases:	S22 Do not inhale dust S24/25 Avoid contact with skin S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S28 After contact with skin, wash immediately with plenty of water S36/37 Wear suitable protective clothing and gloves

WGK(Water  
Danger/Protection):

CANADA: None of the chemicals in this product are listed on the



DSL/NDSL list

Biofilter media is not listed on Canada's Ingredient Disclosure List.

Exposure Limits:

#### **SECTION 16 – Additional Information**

MSDS Creation Date: May 1, 2000

Revision 001

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall BioREM Technologies Inc. be liable for any claims, losses, or damages of any third party or for the lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising.