

BioRem-2000™ Wastewater Solutions

Water Treatment™ Phosphorous

- A powerful blend of microbes and natural botanical blends designed to remove phosphorous.
- Reduces BOD, COD and TSS levels in waste water operations up to 90%.
- Reduces odor in waste water facilities, lift stations, holding ponds and landfill applications from 85% to 100%.
- Removes nitrogen, captures and digests the soluble and organic phosphorous.
- Significantly reduced the phosphorous levels in a minimal amount of time.
- Reduces sludge and odor.
- Effluent quality is improved.
- Resistant to many chemical shocks and decreases recovery time.

There are two basic options for phosphorus removal in wastewater treatment: chemical precipitation and biological. Chemical precipitation will increase the volume of primary sludge to be handled and possibly interfere with the thickening chemicals used in the solids handling system. Ferric chloride and aluminum sulfate products are considered hazardous and are used to eliminate phosphorous, starving the microbes of needed phosphorous and nitrogen which kill the microbe population. The sludge created by these hazardous chemicals cannot be used and cannot be digested. If aluminum sulfate is used for precipitation, there may be a question of adding aluminum to the sludge being disposed. The sludge can be eliminated with BioRem-2000 Water Treatment™ Phosphorous by using the phosphorous and nitrogen levels to generate more microbe population, while eliminating them in the system.

Specifications

Number of Different Microbial Strains	12
Microbial Count	50 Billion/gramm
Microbial Characteristic	All GRAS Listed
Number of Enzyme Species	7
Enzyme Activity	6,000 u/mg.
pH Activity Range	5-11 pH
Appearance	Amber Liquid
Bioluminesce Test	Poistive for Living Cells
Salmonella	Negative
Listeria	Negative
Phosphorous	Non-Detect

Item Number	Product	Unit Size
8604-030	BioRem-2000 Water Treatment Phosphorous™	30 Gal.
8604-055	BioRem-2000 Water Treatment Phosphorous™	55 Gal.

Bioremediation, Inc.
P.O. Box 6129
South Bend, IN 46617
888-242-2898

Water Treatment Phosphorous™

Material Safety Data Sheet

BIOREMEDIATION INC.
CORPORATE: 888-242-2898
P.O. Box 6129
SOUTH BEND IN ,46617

CHEMTREC: 800-424-9300

HAZARD RATING

1= Slight
2= Moderate
3= High
4= Extreme
0= Insignificant

HEALTH	1
FIRE	0
REACTIVITY	0
P.P.E	B

DATE PREPARED: 6/8/04

DATE REVISED: 6/8/04

DATE OF ORIGINATION: 11/12/98

I. PRODUCT IDENTIFICATION:

Water Treatment Phosphorous™

COMMON NAME: CLEANING COMPOUND
GENERIC NAME: CLEANER
CHEMICAL: MIXTURE

II. HAZARDOUS INGREDIENTS:

Ingredients	CAS	%	OSHA PEL	ACGIH TLV
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DOES NOT CONTAIN ANY HAZARDOUS INGREDIENTS

III. PHYSICAL/CHEMICAL CHARACTERISTICS:

BOILING POINT: 212 APPEARANCE: AMBER
SPECIFIC GRAVITY: 1.0031 FORM: LIQUID
MELTING POINT: N/D ODOR: BLAND
EVAPORATION RATE: N/D VAPOR DENSITY: N/D
SOLUBILITY (H2O, 25C): Soluble pH: 7
VOLATIZES CONTENT: 0 VOC (g/L) 0

IV. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: DEGREES More than 300F
LEL: N/D
UEL: N/D
Autoignition Temperature: N/D
Extinguishing Media: Product is water-based and will not support flames.
Unusual Fire/Explosion Hazards: Closed containers exposed to heat may rupture due to pressure buildup.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, hydrocarbons, steam.

V. REACTIVITY:

Stable
None known

CONDITIONS TO AVOID:

VI. HEALTH HAZARDS:

ROUTES AND INDICATIONS OF EXPOSURE

EYES: May cause irritation to eyes.
SKIN: Good industrial hygiene recommended.
INHALATION: N/A
INGESTION: May cause irritation.
TOXICITY DATA: None as listed by OSHA, NTP, IARC or EPA

EMERGENCY FIRST AID:

EYES: Flush eyes for fifteen minutes with water.
SKIN: Wash exposed areas with soap and water.
INHALATION: Remove victim to fresh air or oxygen supply. Seek medical attention if breathing difficulty persists.
INGESTION: If conscious, give victim two glasses of water to dilute ingested material. Do not induce vomiting.

VII. SPILL, DISPOSAL PROCEDURES AND PRECAUTIONS:

HANDLING: Keep closed when not in use. Store at room temperature. Prevent product from freezing. Follow MSDS and Label warnings even after package is empty.
Material Spillage: Contain, retrieve spilled materials (absorb, pump, vacuum)
WASTE DISPOSAL: This material is NOT defined as hazardous by the Resource Conservation and Recovery Act. It is the product users responsibility to determine at the time of disposal, whether a material containing the product or derived form the product should be classified as a hazardous waste. (40 FR 261020-40). Spill and releases of this material are not reportable under S.A.R.A. (III) Sec. 313.

VIII. PERSONAL PROTECTIVE EQUIPMENT (P.P.E.):

PROTECTIVE EQUIPMENT: Wear safety glasses and gloves.
RESPIRATORY PROTECTION: General ventilation recommended.
ENGINEERING CONTROLS: Keep containers closed when not in use. Do not handle or store near strong oxidants.
PERSONAL HYGIENE: Cleanse skin thoroughly after contact.

IX. REGULATORY INFORMATION:

D.O.T. SHIPPING NAME: NON-REGULATED
D.O.T. HAZARD CLASSIFICATION: N/A
S.A.R.A. III Sec. 311 & 312: N/A
S.A.R.A. III Sec. 313: NOT covered under Sara 313
R.C.R.A.: NO
TSCA Registry: YES

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