



## MATERIAL SAFETY DATA SHEET

Prepared: 7/1/10

N.A.: Does Not Apply - N.K.: Not Known

### Section I - Product Information

Manufacturer's name: Osprey Biotechnics  
Emergency Telephone Number: (800) 553-7785  
Address: 1833-A 57<sup>th</sup> Street, Sarasota, Florida 34243  
Common Name: Bacterial Inoculant for petroleum degradation  
Trade Name: **MUNOX®**  
Microbial Formulation: The product formulation consists of naturally occurring microorganisms.

### Section II – Composition/ Information on Hazardous Ingredients

Basic Material Contains no hazardous substances.

### Section III – Hazard Identification

Emergency Overview: Natural, tan liquid, earthy scent  
Potential health effects: Acute eye: Considered a slight eye irritant  
Acute skin: Not considered to be irritating to the skin  
Acute ingestion: Low order of toxicity. LD50 > 5,000 mg/Kg (oral, rat)  
Acute inhalation: Not an expected route of exposure  
Chronic effects: None known.

### Section IV – First Aid Measures

Emergency First Aid Procedures:  
Eye Contact Flush eyes with sterile water until irritation subsides or stops. Contact a physician.  
Skin Contact Wash with soap and water.  
Inhalation Although not an acute hazard as tested in rats, chronic effects are unknown. Upon prolonged or repeated respiratory exposure, contact a physician.  
Ingestion Low order of toxicity. Upon ingestion, induce vomiting and contact a physician.

### Section V – Fire Fighting Measures

Flash Point (Method Used)	N.A.			
Flammable Limits	LEL	N.A.	UEL	N.A.
Extinguishing Media	N.A.			
Special Fire Fighting Procedures	None			
Unusual Fire and Explosion Hazard	N.A. in liquid state			

### Section VI – Accidental Release Measures

Steps to be taken in case material is released or spilled No Hazard. Wash away with plenty of water.

### Section VII – Handling and Storage

Store at room temperature. Protect from freezing.

### Section VIII – Exposure Controls/Personal Protection

General Precautions Treat as you would any chemical or biological material.  
Special Precautions Wear protective water resistant gloves and safety glasses with side shields.  
consumption. This product is not intended for human or animal

### Section IX – Physical and Chemical Properties

Boiling Point (°F)	212 (760 mm Hg)(Approx.)
Specific Gravity	1.0 (Approx.)
Vapor Pressure (mm Hg)	24.00 (Approx.)
Percent Volatile by volume (%)	N.A.
Evaporation Rate	N.K.
Solubility in water	Soluble
Appearance and Odor	Blue color/earthy scent

## Section X – Stability and Reactivity Data

<u>Stability</u>	Stable
<u>Incompatibility</u> (Material to avoid)	N.K.
<u>Hazardous Decomposition Products</u>	This product does not undergo spontaneous decomposition. Typical combustion products are carbon, carbon dioxide, nitrogen and water.
<u>Hazardous Polymerization</u>	Will not occur.

## Section XI – Toxicological Information

### Toxicology

#### Acute Studies

\* Rat oral LD<sub>50</sub> is greater than 5 g/Kg of body weight; as evidenced by no observed mortality after rats were dosed with 5 g/Kg at a concentration of 500 mg **MUNOX**®/ml of water and a dose volume of 10 ml/Kg of body weight.

\* Rabbit dermal LD<sub>50</sub> is greater than 2 g/Kg of body weight; as evidenced by no observed mortality after rabbits were exposed to test material applied to abraded and non-abraded occluded skin for 24 hours. No severe dermal effects were reported at the dose site.

\* Eye irritation in rabbits was reported as slight. Highest observed scores out of a possible score of 110 were:

1 hour: 12; 24 hours: 8; 48 hours: 4; 72 hours: 4; 4 days: 2; 7 days: 2; 10 days: 2; 14 days: 2.

\* Rat inhalation of the test material at an average analytical exposure concentration of 1.2 mg/l of **MUNOX**® (nominal concentration of 37 mg/l) for 6 hours produced no mortality.

#### Chronic Health Hazards

- Although chronic studies using **MUNOX**® are not available, inhalation of this product should be prevented due to unknown long-term effects.

#### Special Notes

Not for human and animal consumption.

## Section XII – Ecological Information

Acute aquatic toxicity LC50	Fathead Minnows
Not toxic at 100%	

## Section XII – Disposal Considerations

<u>Waste Disposal Method</u>	Use normal liquid waste methods in conformance with pertinent federal, state, and local regulations
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## Section XIV – Transportation Information

Proper Shipping Name: Not Regulated  
Special Information: None

## Section XV – Regulatory Information

Workplace classification: This product is considered non-hazardous under the OSHA Hazard Communication Standard  
SARA Title 3: None  
TSCA Status: Listed  
RCRA classification: Unknown  
CERCLA reportable quantity: None Listed

## Section XVI - Other Information

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