# MATERIAL SAFETY DATA SHEET

**Zorbit Technologies Inc. MSDS NO. 20 January 2012**

**3655 32nd Street, Unit 2W Port Huron, MI 48060**

## I. PRODUCT DESCRIPTION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>PEAT PLUS OIL ABSORBENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Synonyms:</td>
<td>NONE</td>
</tr>
<tr>
<td>Chemical Family:</td>
<td>PEAT MOSS</td>
</tr>
<tr>
<td>Emergency Telephone Number:</td>
<td>1-800-527-4947 1-810-364-0228</td>
</tr>
</tbody>
</table>

### Hazard Rating

<table>
<thead>
<tr>
<th>Level</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least 0</td>
<td>Slight 1</td>
</tr>
<tr>
<td>Moderate 2</td>
<td>High 3</td>
</tr>
<tr>
<td>Extreme 4</td>
<td></td>
</tr>
</tbody>
</table>

### Health

| Health | 0 |
| Fire | 1 |
| Reactivity | 0 |

### II. INGREDIENTS

<table>
<thead>
<tr>
<th>Composition</th>
<th>Exposure Limits %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOISTURE</td>
<td>N/A</td>
</tr>
<tr>
<td>PEAT</td>
<td>Nuisance particulate 10mg/m³ 99%</td>
</tr>
</tbody>
</table>

### III. HEALTH INFORMATION

#### Chronic and Acute Effects of Over Exposure

- **Inhalation:** MAY CAUSE SLIGHT IRRITATION WITH VERY HIGH CONCENTRATIONS
- **Ingestion:** NO KNOW HAZARD
- **Skin:** NO KNOWN HAZARD
- **Eyes:** DUST PARTICLES MAY CAUSE MINOR EYE IRRITATION
- **Applies to unused Peat Plus**

#### Toxic Date: ESTABLISHED NON-TOXIC

### IV. PERSONAL PROTECTION INFORMATION

#### Ventilation:

Adequate ventilation should be available to keep dust concentrations below exposure limits

#### Respiratory Protection:

A NIOSH Approved Dust Respirator should be worn when dust standards are exceeded

#### Eye Protection:

Safety glasses with side shields are recommended

#### Skin Protection:

Protective clothing is not necessary for Peat Plus, but may be required to handle absorbed hydrocarbons

Other:

Washing facilities should be available

### V. EMERGENCY & FIRST AID PROCEDURES

#### Inhalation

Remove to fresh air

#### Ingestion

Do not induce vomiting

#### Eyes:

Flush eyes with running water to remove particles

#### Skin:

Wash irritated areas with mild soap and water

IF IRRITATION OR DISCOMFORT PERSIST, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: SYMPTOMATIC TREATMENT

### VI. PHYSICAL DATA

<table>
<thead>
<tr>
<th>Vapor density</th>
<th>Solubility in H₂O</th>
<th>Appearance, Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>NOT SOLUBLE</td>
<td>BROWN, FIBROUS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Melting Point</th>
<th>Vapor Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>pH</th>
<th>Evaporation Rate</th>
<th>% Volatile by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-6</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### VII. REACTIVITY

#### Conditions & Materials to Avoid:

STRONG ACIDS pH 2-3

#### Hazardous Decomposition Products:

NONE KNOWN

#### Stability:

STABLE

#### Hazardous Polymerization:

NOT KNOWN TO OCCUR

### VIII. FIRE & EXPLOSION HAZARDS

- Auto Ignition Temperature: 400°F 260°C
- Special Fire Fighting Procedures & Precautions:

STANDARD FIRE PROTECTION EQUIPMENT
- Flash Point & Method Used:

Lower Flammable Limits in Air % by Volume: N/A
- Extinguishing Methods:

USE MEDIA NEEDED TO CONTROL SURROUNDING FIRE
- Unusual Fire & Explosion Hazards:

WILL WICK PETROLEUM-BASED PRODUCTS ON OPEN FLAME

### IX. SPILL OR LEAK PROCEDURES

- Waste Disposal:

UNUSED PEAT PLUS IS NOT HAZARDOUS. DISPOSE OIL-SATURATED PEAT PLUS ACCORDING TO LOCAL REGULATIONS GOVERNMENT MATERIAL ABSORBED

- Emergency Action:

Sweep up and containerize if unused

### X. STORAGE & TRANSPORTATION REQUIREMENTS

#### Storage Precautions:

STORE IN DRY PLACE TO PREVENT UNWANTED MOISTURE UPTAKE

- Other Precautions:

NONE

- Transportation Requirements:

NORMAL FREIGHT

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Due to the variety of liquids and chemicals involved in spills, the manufacturer cannot recommend disposal procedures or guarantee the performance of PEAT PLUS other than to replace such quantity of product proved to be defective. PEAT PLUS disclaims any liability for loss or damage incurred in connection with the use of this substance.

The **ORIGINAL GREEN** Hydrocarbon Extinguisher
The purpose of this demonstration is to show that Peat Plus is hydrophobic, completely encapsulates hydrocarbons on contact and removes them from water:

- Fill two clear glasses half full, with water
- Place on piece of aluminum foil about 1 ft. long.
- In one glass gently pour 1/4 inch of transmission fluid on top of the water. (trans. fluid for color contrast with P.P., any oil or hydrocarbon can be used.)
- Dip soft end of feather into oil to show instant contamination and place contaminated feather on the foil.
- Sprinkle Peat Plus into both glasses. (on water P.P. remains light brown and floats, on oil P.P. turns dark on contact)
- Apply Peat Plus over oil until there is a light brown covering
- Dip hard end of feather through Peat Plus has encapsulated oil. (no oil sticks to feather)
- Sprinkle Peat Plus on contaminated feather (both sides) and remove by pulling feather between forefinger and thumb. (oil is completely removed from feather)
- Push Peat Plus on the foil to the side to show no oil on the aluminum.
PEAT PLUS®

THE ONLY GREEN ABSORBENT ON THE MARKET

The definition of GREEN is from the earth back to the earth. Peat Plus® is produced from a true Sphagnum Moss that is farmed in the places it grows.

We have found that by removing water from the moss and not destroying the physical plant, Peat Plus® is produced. The product becomes hydrophobic (hates water) but has the ability to encapsulate hydrocarbons on contact and render them harmless to the environment.

The mixture of hydrocarbon and Peat Plus® can be mixed with any bioactive soil, grass, landfill, and this mixture becomes a biomass where the hydrocarbon is broken down by natures microbes and in the process some fertilizers are produced and the natural Peat is returned to the earth. The Peat Plus® process is a true fix for all hydrocarbon spills on land or on water.

**Lets get rid of the Poop and Scoop Mentality**

We have the natural technology to fix our problems from hydrocarbon spills along with substantial cost reductions.

**IT IS TIME WE USE IT.**
Zorbit Technologies, Inc.
Brings You the NEW & IMPROVED Activated Peat...

The PLUSES of the... PLUS™

- Proprietary drying process which allows us to control moisture content
- Uniform bag weight
- Floats on water for several weeks
- Priced economically

PEAT PLUS™ encapsulates 25% additional hydrocarbons per pound than other activated peat products. PEAT PLUS™ will float on water and pickup hydrocarbons in excess of four weeks versus only two days with other activated peat. These pluses are attainable because of the state-of-the-art production machinery in our factory.

Almost all petroleum hydrocarbons will be degraded to carbon dioxide and water by microbial process within Peat Plus™ within a relatively short time.

The speed with which petroleum products biodegrade is affected by many factors, including oxygen levels, moisture, temperature, acidity, nutrient content and the size and type of natural microbes present. Significant degradation of petroleum hydrocarbons in soil has been documented in time periods of less than three months. Depending upon the nature of the petroleum product more typical time periods for degradation are in the range of six to eighteen months. The hydrocarbons trapped inside Peat Plus™ will degrade to carbon dioxide and water long before the Peat Plus™ itself does.

Oil, retained and biodegrading inside non-leaching Peat Plus™, is a better alternative to free floating oil which can continue to damage fish, plants and wildlife.

Peat Plus™ is lightweight for easy handling and transportation. One 30 pound bale of Peat Plus™ will effectively do the same job as 20 to 30 bags of clay, resulting in significant savings in time, labor and storage costs.

Peat Plus™ has the advantage of being nonabrasive. For abrasive wear to happen to machinery it must come into contact with another substance of equal or greater hardness. Peat Plus™, with a hardness factor of about 1 will not damage steel which has a hardness factor of 5. Clay, the most commonly used inorganic sorbent, has a hardness factor exceeding 6 and will damage metal parts and cause rapid deterioration of soft rubber and plastic parts. Peat Plus™ can be used around all types of machinery without fear of damaging expensive equipment.

Most petroleum products are extremely volatile. Effective spill response involves rapid limitation of the exposure pathways to prevent skin contact, inhalation or ingestion. The vapor suppressive and static resistant qualities of Peat Plus™ are significant safety feature for spill response crews.

**Properties of Peat Plus™**
- Absorbs on Contact
- Effective on Land & Water
- Non-toxic
- Non-Leaching
- Non-biodegradable
- Lightweight
- Nonabrasive
- Vapor Suppressive
- Easily Disposed
- Cost Effective