CHEM-BAC Laboratories, Inc.
P.O. BOX 19198 CHARLOTTE, N.C. 28219
TEL: 704-394-6381 • FAX: 704-394-6382

April 15, 2011

Mr. Tom Uskup
GreenSorb
200 S. Wacker Drive
Suite 1500
Chicago, IL 60606

Over the past several months, our laboratory has tested the absorbent capabilities of your company's product known as GreenSorb. At your request, we tested GreenSorb with certain fluids used in Aviation such as Jet-A, SkyDrol hydraulic fluid, and waste motor oils. Our testing focused on GreenSorb's performance under the scrutiny of EPA test standards for safe disposal of waste. The data for all of those successful test results are in our formal report.

When testing absorbent products, it is not only imperative to test the encapsulation properties of the product, but equally important to ensure that the final encapsulated waste material is capable of being disposed of in compliance with EPA regulations. The EPA requires that waste products undergo specific waste characteristic studies to ensure that their disposal does not adversely affect the environment. These waste studies include ignitability, corrosivity, semi-volatile leaching characteristics, volatile leaching characteristics, and regulated metal leaching characteristics. All of these studies determine whether or not a waste material must be classified and disposed of as hazardous waste.

GreenSorb demonstrated superior encapsulating properties when subjected to Jet A, Skydrol hydraulic fluid, and waste motor oil. The chemical and physical properties of this 100% natural product absorbed the aviation products tested in an efficient manner with respect to encapsulating times and ratios. Surface conditions were clean following the removal of the encapsulated mixtures.

The encapsulated waste material generated from the aviation products passed all of the above mentioned EPA conformity tests. The encapsulated mixtures did not ignite or propagate combustion, were not corrosive, and did not leach any of the regulated volatile, semi-volatile, or regulated metals when subjected to simulated landfill conditions. Based on all of these regulatory tests, the encapsulated aviation products tested do not have to be listed as hazardous wastes.

An additional test requested was an ash analysis of the GreenSorb product using Jet-A as a test liquid. This test would reveal useful information concerning the incineration properties of the encapsulated Jet A waste product. The result of the test was a reduction in waste mass of 33%. The incineration process of the encapsulated Jet fuel decreased the waste mass by 1/3.

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In summary, the laboratory studies performed on GreenSorb prove that it efficiently encapsulates Jet A, Skydrol hydraulic fluid, and waste motor oil. GreenSorb encapsulates these aviation fluids in a manner that allows for the waste material to be disposed of safely and within EPA regulations. The encapsulated aviation liquids tested will not have to be characterized as hazardous waste.

A chart summarizing the product testing performed on GreenSorb is included as an attachment for reference purposes.

Sincerely,

James T. Ward
Supervising Chemist

Attachment :
Laboratory Testing and Results Summary

GreenSorb® – LABORATORY TESTED FOR EPA WASTE DISPOSAL CONFORMITY

AVIATION PRODUCT TESTING

Spill Types	Encapsulation Ratio Necessary to Pass Paint Filter Test (A)	Time Required to Encapsulate (minutes)	Surface Condition Following Absorption	Passes Paint Filter Test	Passes TCLP Analysis for Volatile Compounds	Passes TCLP Analysis for SemiVolatile Compounds	Passes TCLP Analysis for Metals	Passes Corrosive Tests	Passes Ignitability Tests
Jet A	2:1	2.5	Clean/Dry	✓	✓	✓	N/A	✓	✓ (B)
Skydrol®	1.5:1	2.0	Clean/Dry	✓	✓	✓	N/A	✓	✓
Used Motor Oil	2:1	2.0	Clean/ Slight Film	✓	✓	✓	✓	✓	✓

All encapsulation ratios are shown as weight to weight. Average densities of the test liquids were used to obtain the following weight to volume ratios.
13.3 lbs of GreenSorb per 1 gallon of Jet A
12.6 lbs of GreenSorb per 1 gallon of Skydrol
14.6 lbs of GreenSorb per 1 gallon of Waste Motor Oil

(A) Unless otherwise noted, the encapsulation ratio shown above was used to meet the EPA regulatory tests listed.
(B) Encapsulation Ratio of 6:1 was needed to pass EPA Method 1030 "Ignitability of Solids".

<u>EPA Regulatory Test Methods Used</u>
Paint Filter Test **– Method 9095B**
Toxicity Characteristics Leaching Procedure (TCLP) – Volatile Compounds **– EPA Method 1311 ZHE / 8260B**
Toxicity Characteristics Leaching Procedure (TCLP) – Semivolatile Compounds **– EPA Method 1311 / 8270D**
Toxicity Characteristics Leaching Procedure (TCLP) – Metals **– EPA Method 1311 / 6010**
Corrosive Property Test**– EPA Method 9045**
Ignitability of Solids **– EPA Method 1030**