

Alberta Research Council: Absorbency Validation Test



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September 23, 2002

Peter Eastwick  
 Spill-Sorb Inc.  
 Suite 301, 12204 - 106 Ave  
 Edmonton, Alberta  
 T5N 3Z1

Dear Peter:

Re: Testing of Biomatrix/Spill-sorb sorbent material

The test results are in the tables below. The tests were conducted in accordance with CAN/CGSB-183.2-94 *Method for Testing Sorbents*. Three liquids: diesel oil (summer), 30 weight motor oil, and 85-140 weight gear oil were tested for their sorption on Biomatrix/Spill-sorb material. The sorption capacity is listed as the average of 3 tests for each liquid in the units of grams sorbed per gram of sorbent material.

The capacity test consists of two parts: (i) a sorbed capacity under gravity drainage shown in Tables 1 and 2 below:

Table 1. Sorbent capacity under gravity drainage

Biomatrix/Spill-sorb sorbent capacity under gravity drainage	Sorbent capacity in grams of liquid sorbed per gram of sorbent.	Test 1	Test 2	Test 3
Diesel oil	<b>4.03 gm/gm</b>	4.04	3.95	3.58
SAE 30 oil	<b>7.31 gm/gm</b>	7.36	6.88	7.68
SAE 85-140 gear oil	<b>7.76 gm/gm</b>	7.64	7.98	7.65

Table 2. Sorbent capacity under gravity drainage in volume of liquid units

Biomatrix/Spill-sorb Sorbent capacity in volume of liquid absorbed under gravity drainage	Sorbent capacity in millilitres of liquid sorbed per gram of sorbent.
Diesel oil	<b>4.88 ml/gm</b>
SAE 30 oil	<b>8.35 ml/gm</b>
SAE 85-140 gear oil	<b>8.50 ml/gm</b>



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and (ii) a sorbed capacity after recovery of test liquid under compression of 50 psi. shown in Tables 3 and 4 below:

Table 3. Sorbent capacity after recovery of liquid under 50 psi pressure

Biomatrix/Spill-sorb Sorbent after recovery of liquid under 50 psi	Sorbent capacity in grams of liquid sorbed per gram of sorbent.	Test 1	Test 2	Test 3
Diesel oil	3.55 gm/gm	3.55	3.51	3.58
SAE 30 oil	3.94 gm/gm	4.02	3.85	3.84
SAE 85-140 gear oil	4.52 gm/gm	4.66	4.38	4.32

Table 4. Sorbent capacity in volume units after recovery of liquid under 50 psi pressure

Biomatrix/Spill-sorb Sorbent capacity as a volume of liquid after recovery of liquid under 50 psi	Sorbent capacity in millilitres of liquid sorbed per gram of sorbent.
Diesel oil	4.30 ml/gm
SAE 30 oil	4.50 ml/gm
SAE 85-140 gear oil	5.02 ml/gm

If there are any questions or concerns please contact Henry Bertram.

Yours truly,

Henry Bertram  
 Research Scientist

HB/dd  
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