

UNIVERSITI TEKNOLOGI MARA

**THE STUDY OF INTERFACE SHEAR STRENGTH
BETWEEN GEOTEXTILE AND SOIL LINER
CONTAINING WITH DIFFERENT PERCENTAGE OF
SODIUM BENTONITE**

NOR AZIZAH BINTI CHE AZMI

MSc

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DECLARATION BY THE CANDIDATE

I Nor Azizah binti Che Azmi, UiTM No 2011159585 confirm that the work in this report is my own work and the appropriate credit has been given where references have been made to the work of other researchers.



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Student Name : NOR AZIZAH BINTI CHE AZMI
Student ID : 2011159585
Date : 5 JUNE 2013

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ABSTRACT

The purposed of this research is to focus on the interface shear strength between geotextiles and soil with different percentage of sodium bentonite. Firstly, the physical properties of the soil sample must be identified in orderr to determine the soil classification. The laboratory test includes atterberg limit test, shrinkage limit test, specific gravity test, pH test, sieve analysis test and hydrometer test. The soil samples which are natural soil sample, soil added with 0% of sodium bentonite, soil added with 2.5% of sodium bentonite, soil added with 5.0% of sodium bentonite, soil added with 7.5% of sodium bentonite and soil added with 10% of sodium bentonite. Based on the result, the percentage of sodium bentonite did not give good relationship to the soil samples such liquid limit test, plastic limit test, plasticity index and specific gravity as the value that obtained quite similar and did not increased when increasing percentage of sodium bentonite. After the soil is classified, the next test was compaction test. The purpose of the compaction test is to get the value of optimum moisture content that need to be applied during direct shear box test. However, the value for compaction and direct shear test also did not give good result as the value for optimum moisture content, cohesion and friction angle also quite similar to each other thus, it can be clearly said that the percentage of sodium bentonite did not give effect to the soil samples and not suitable to be use in this type of soil.

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