

Hydric and mechanical behavior of a dune sand-bentonite mixture

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Abstract :

This paper presents a study on the valorisation of local saharian materials such as dune sand and bentonite intended for the realisation of liner base layers in the conception of insulation barriers for hazardous waste centers. Firstly, the results of preliminary hydraulic conductivity tests on dune sand-bentonite mixtures, are presented. Secondly, tests are carried out on the selected mixture compacted to NOP to study the behaviour on drying and wetting paths, to characterize hydraulic conductivity using two different techniques, and the behaviour on triaxial CD and CU paths. The selected dune sand-bentonite mixture satisfies the regulation requirements and hence constitutes a good local and economical material for the conception of barrier base liners.

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