

FOR IMMEDIATE RELEASE

**AFRISAM'S CEMENT COMES UP TRUMPS FOR USE AS STABILISER IN
PIET RETIEF CAMDEN ERMELO ROAD CONTRACTS**

AfriSam's CEM 11 32.5BL cement has been specified for two contracts being undertaken by Stefanutti Stocks Roads and Earthworks on the busy N2 highway in Mpumalanga.

The cement, produced by AfriSam's Ulco plant in the Northern Cape, best met the required C3 specifications in tests conducted at the on-site Civilab laboratory in terms of unconfined compressive strength (UCS), indirect tensile strength (ITS) and wet/dry durability (WDD).

The initial consumption of cement (ICC) tests were undertaken using samples provided by various cement suppliers at mix ratios between 1% and 6% with G5 aggregate supplied by Rietspruit Crushers, the stone supplier which is providing aggregate for both contracts. The laboratory recommended the use of CEM 11 32.5BL at a 2.5% cement ratio.

"The tests indicated that the strength of the subbase layer with the alternative cements was too high for the amount of cement used, resulting in the layer

being too rigid and therefore susceptible to cracking. Although the competitive cement was cheaper, it did not perform to requirements," says Richard Harrison, director of Stefanutti Stocks Roads and Earthworks.

The first of the two contracts comprises the rehabilitation of an 81 km stretch of the N2 highway from Piet Retief to Camden which is described as being in a fair to poor condition. Project completion date is October this year, 25 months after the contractors moved on site.

The second contract comprises the reconstruction of a 19 km stretch of road between Ermelo and Camden. The contract was awarded in August 2010 and is scheduled for completion in May 2012. The contractors are working on half-road widths with traffic control on both contracts to allow vehicles to continue using the N2 during construction.

Harrison comments: "Both contracts have proved challenging because of the high volume of heavy trucks that use the route, including vehicles carrying coal to the Camden power station. Abnormal load vehicles transporting heavy mechanical and electrical equipment from the ports of Richards Bay and Durban also use the route because of the absence of obstacles such as overhead bridges."

Much of the heavy equipment is destined for installation at power stations.

Eskom is contributing to the cost of the road works, which were contracted by the South African National Roads Agency (SANRAL).

In terms of the second contract on the 19 km stretch of the N2, the existing road layers are being milled off and stockpiled for reuse as selected layers. The two sub base layers of 150 mm each are being reworked as one 300 mm layer to the C3 sub base standard using CEM 11 as the stabiliser. Thereafter, a 150 mm GI base is being laid followed by a 50 mm continuously graded asphalt surfacing.

The contract includes the provision of both east bound and west bound climbing lanes on steep slopes along the route as well as the widening of the road to three lanes at various points.

“The rehabilitation of the 81 km stretch of the N2 between Piet Retief and Camden carries a high volume of heavy trucks transporting timber and coal trucks using the route between the Driefontein Mine and the Panbult rail station. New mines closer to Ermelo are also using the road for the transportation of coal,” Harrison states.

Recycling machines capable of scarifying the existing two sub base layers to a depth of 300 mm are being used in the rehabilitation project. Water is added

automatically at the required moisture content of 6% to the recycled material by the recycling machine.

Harrison also mentions that they had to keep track of temperatures in particular during this contract because of the water being added to the mix. No stabilisation shall be done with falling air temperatures when the air temperature falls below 7° C, or during rising air temperatures, when the air temperature is below 3° C.

The contractors undertake rehabilitation of the road in work lots of an average 600 metre with continuous testing being undertaken to ensure that each subbase layer meets the required specifications. Civilab has set up laboratories on both project sites to undertake testing.

“We are pleased that AfriSam’s cement is recognised as being of such a high quality and with the oversight of the laboratories by the project consulting engineers, Stewart Scott International and Stefanutti Stocks, we believe that these two projects will meet the high standards set by SANRAL.”

CAPTION PIC 01 : The StefStocks recycling machine on the N2 highway contract in Mpumalanga.

CAPTION PIC 02 : AfriSam CEM II being spread by hand on the N2 highway
contract in Mpumalanga.

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