

Project Info



10 / 05 / 12



CC5™ Bulk Rolls



500m²



Transverse layers



Rustenburg,
NW Province,
South Africa



Concrete Canvas SA



CC5™ used to line a 50
year flood dam in the
salvage yard of Impala
Platinum Mines in South
Africa



Completed dam lined with CC5™

In May 2012, Concrete Canvas® GCCM* (CC) was used to create and line a 50 year flood dam in the salvage yard of the Impala Platinum Mine in Rustenburg, South Africa. The 35m x 15m dam was being excavated to contain excess water in the event of flooding, which could cause serious delays and damage to the mine and surrounding infrastructure. CC was used as a liner for the dam as an alternative to concrete slabbing, acting as a durable, water-impermeable concrete layer which would stop any stored flood water saturating the soil underneath.

After the preparation team had excavated the dam, 500m² of CC5™ was supplied to the project site in bulk rolls. Basic, readily available hand tools were used on site to cut the CC to the required length, before adjacent layers were taped along the joint on the impermeable side using Very High Bond (VHB) Tape. The CC sections were then laid in place in the dam, pegged along the outer edges, and the joints along the concrete side sealed with Hybriflex, a UV-resistant, waterproof sealant. On-site equipment was then used to hydrate the CC.

The installation was very successful. CC was able to be installed in high temperatures of 40°C+, by a team of 10 in just under two days, using basic tools and with very little training. The dam has now been in operation for over a year and has continued to operate efficiently with no leaks or failures. Impala Platinum have noted that CC was easy to handle and install, and provided a far more cost-effective alternative to traditional concrete linings.

*Geosynthetic Cementitious Composite Mat





The dam site was excavated and cleared by an on-site team prior to installation of CC



The project was completed using readily available hand tools



Joints between layers of CC were sealed with a VHB tape underneath



A UV-resistant, waterproof sealant was used to seal the joints on the concrete side