ROCKCRETE EQUIPMENT (PTY) LTD
Company Reg. No: 1947/024677/07

ROCKSEAL REPORT

Method of Application

ROCKSEAL is either applied by block brush or by an air operated diaphragm pump with a unique nozzle system that does not require additional air at the nozzle.

Environmental Conditions

Sensitivities to changes and extremes in temperature must always be evaluated when considering a sealant for a particular application. Tests have shown that the rate of evaporation depends upon ambient rock/air temperature, humidity and airflow or ventilation. The temperature and humidity levels in a mining environment are, therefore, important and should be approximated when testing and evaluation of sealants performance are done in laboratory environmental conditions. Visual confirmation of the quality of the spray application process is easier because ***ROCKSEAL*** in blue colour can contrast against the walls of the mine.

ROCKSEAL can consolidate various problematic rock types and prevent rock oxidation, degradation and weathering both on the surface and in any fractures and joints filled by the sealant in specific high-risk areas.

ROCKSEAL application is speedy, easy and has increased mobility.

ROCKSEAL gives the mine additional time to install final support.

ROCKSEAL has a basic and simpler application procedure and spray application system.

Shrinkage

ROCKSEAL, once mixed with the Styrene Acrylate and the copolymer emulsion the product has little or no shrinkage. As the ***ROCKSEAL*** cures, the strength, stiffness and adhesion increase significantly.

Freshly exposed rock walls after the blast can be sealed with relative ease immediately or sooner than any other support type before the rock mass has time to loosen.

Less material handling, remote and mechanized method of spraying distant from the development face (less labour intensive) enhances worker health and safety.

Adhesive strength is a significant property controlling the design and performance of sealants. The main function of such sealants would be to seal the kimberlitic rock to prevent weathering of underground excavations. Previous adhesion tests indicated that the measurements are useful to understand the weathering process of Kimberlites. The attached laboratory test, conducted at Geopractica Engineering Specialist and Construction Materials testing facility in Johannesburg, provide useful results indicating the adhesion strength of ***ROCKSEAL*** on the Kimberlitic substrate. The adhesion strength is one of the most important mechanical properties of a sealant material.