

UNIVERSAL BLENDING (PTY) LTD

2012/128289/07

MANUFACTURING



Coldlay Surfacing System the solution
for all conditions.



"Prevention is better than cure".

<https://www.roadsaver.co.za>

Vision

Our Solitary Vision within the company, is to be a contributing Solution, supporting the maintenance of the road infrastructure in South Africa, to be extended into Africa and the rest of the world.

We aim to provide a long-lasting product to ensure that the continued maintenance of our roads remains in good standing.



is the key to consistency and assurance of high-level quality, safety and trust. This will result in a long-standing relationship by meeting and exceeding expectations.

Mission

Our mission statement is *“Prevention is better than cure”*.



has been developed to become a household name within the maintenance of our road infrastructure. What sets Roadsaver apart from the alternative products on the market are the extensive testing the product has been subjected to.



has Agrément certification which in itself speaks volumes to being the only accredited product currently on the market.



1. INTRODUCTION - ROADSAVER COLDLAY SURFACING SYSTEM



is manufactured from modified bitumen, aggregates and crusher run materials.

The advantage of Roadsaver lies in its superior flexibility, binding and sealing capabilities.

It is suitable for road-surface repairs on all the various stages of deterioration, i.e., fixing linear, transverse, block and joint cracks, potholes and ravelling.

Minimal preparation of these damaged road surface areas is required.

Block resurfacing of reinstated road-base layers on normal asphalt pavements, ultra-thin bituminous courses, and concrete surfaces are being conducted.

After placement Roadsaver only requires slight compaction before the road can be opened again to traffic. Roadsaver System is suitable for use in all weather and environmental conditions.



On potholes <1 SQM to a depth of 50mm
 Potholes must be cleaned and all loose materials removed.
 Overfill the pothole by 20% to allow for compacting.
 Level the Roadsaver mix and compact slightly
 On potholes <1 SQM
 Ensure that the base layers are repaired to ENG. Spec.
 Proceed with pothole repair as above, use roller compaction
 Open road for traffic



2. ABOUT UNIVERSAL BLENDING AND ROADSAVER

Corfio Foundations (Pty)Ltd in conjunction with the CSIR-Transportek developed the original formula of Roadfix, a material manufactured with a specific aggregate grading and properties, and a purposely formulated bituminous cold asphalt mix to be used to repair and maintain potholes, trenches and other surface damage on pavements. The CSIR-Transportek and Corfio Foundations (Pty) Ltd) entered into a licensing agreement on 31st March 2003, in terms of which the CSIR-Transportek granted Corfio Foundations an exclusive licence to manufacture and sell the Product Roadfix using the developed intellectual property.

On 17 March 2005 Corfio Foundations paid CSIR-Transportek a once of royalty payment as per Clause 2.I of the “Mutual Termination of Licence Agreement and Transfer of Intellectual Property” as was signed between the parties on 14 March 2005 in Pretoria. In terms of which the Intellectual Property (as defined in the agreement) was transferred to Corfio Foundations.

On 22nd March 2007 the Agrément South Africa accepted Roadfix certification and started with the process of developing criteria and test methods for cold mix asphalt based on the British Board of Criteria for cold-lay surfacing materials.

At that point in time, Corfio Foundations traded as 

Roadfix was produced from hot asphalt and the total mix was then cooled down to form the Roadsaver cold asphalt repair product. Roadfix had to be produced at a hot asphalt production plant. Mr. Botes with the assistance of Ms. EJ van Assen, a research chemist and asphalt technologist, embarked on a project to develop a successful cold bitumen product, based on the initial work to produce a cold asphalt from hot bitumen. To differentiate between the hot bitumen produced (Roadfix) and the improved cold modified bitumen asphalt mix was renamed Roadsaver.



had all the positive qualities of the hot bitumen product, but with the advantage of not requiring a hot bitumen plant and simplifies the production of the asphalt mix. UNIVERSAL BLENDING (PTY) LTD has spent several years developing Roadsaver Crack Sealant and Pothole Filler as a high quality, cost saving product alternative. The underlying factors that have driven this research and development of Roadsaver Crack Sealant and Pothole Filler, is a desire to bring increased business value by offering a product which delivers:

- **Ease of use**
- **Cost effectiveness, and**
- **Durability**

During December 2018 an Agrément Certificate 2018/588 was issued for the Roadsaver Coldlay Surfacing System.

3. MANAGEMENT OBJECTIVES

Our main objective is to provide a permanent solution to one of the main infrastructure concerns in our country - the deterioration of South African roads leading to potholes and total pavement failure.

Pavement failure occurs when an asphalt surface no longer holds its original shape and develops material stress which causes issues. Pavement failure issues include cracking, potholes, depressions, rutting, shoving, upheavals, and ravelling.

Universal Blending identified the deterioration of South African roads into 4 stages, that are mainly attributable to the failure of the binding agents and flexibility of the Surfacing Course.

- I. A properly constructed sub-base and road base will provide the structural strength for the road.

With the increase of heavy truck traffic and loads, stresses and movement of the road base increased over the years.

This movement leads to surface cracks allowing water penetration to the road-base – the birth of the pothole



Roadsaver Bitubind Crack Sealer can permanently seal these cracks as indicated on the LH photo and prevent further deterioration and prevent potholes as indicated on the RH photo

2. Road Traffic causes abrasion on road-surfaces, and with the failure of the binding agent in the Bitumen Mix.



Roadsaver can permanently repair ravelling and stop further deterioration

3. It is inevitable that service trenches will be cut across existing roads and trench reinstatement will happen. Present road surface failures of trench reinstatements indicates the lack of the binding capability of hot asphalt mixes.



Repairs done with products with inferior binding / sealing capability are not permanent



Our second objective is to create and support a business opportunity on different levels. Universal Blending supports established and emerging contractors, whether they are small, medium or large contractors or individuals

Emerging Contractors will be trained to be able to offer their services to Local Municipalities and be able to do repairs on Road classification I & 2 with repairs as fixing linear, transverse, block and joint cracks, potholes and ravelling.

To achieve our objectives, we will follow guidelines and rules to ensure the highest standard of manufacturing and use of our products. We will endeavour to implement an acceptable management system, and to comply to all statutory requirements during the manufacturing, storage handling, transportation and installation of our products.

4. Health and safety

The management of Universal Blending is committed to an active Health and Safety Program and will provide leadership and support to achieve and maintain the highest standards. The safety and health function consists of integrated participation between management and employees and strives to achieve a workplace which is free of hazards. Management accepts their responsibility to inform those who may be exposed to hazards in the workplace and to develop appropriate operation standards as part of an effective prevention program.

Our health & safety management system aims at:

Health and Safety Injury prevention.

Economic loss reduction.

Property damage prevention.

Eliminating losses caused by unplanned interruption to operation

Standard personal protection equipment will include to following:

Poly-Viscose Conti Suite



Alloy Safety Boots



Disposable Pvc Aprons



Heavy Duty Gloves

5. Site and Installation Control

Licensed Contractors need to be registered with the Local Authorities and CIBD as a service provider.

A works order authority to close / restrict roads for repairs must be obtain from the Local Authority

Signs and Safety Gear required for on -site operations.



Front



Back



6. Manufacturing Road saver

To eliminate the use of an incorrect mixing proportion, Universal Blending designed the loader bin of the Aggregate and Crusher Run to ensure that the required mix proportions are controlled.



Optimum Road saver Mix

Optimum Road saver Mix is using the correct specified aggregate and crusher run mix, with a specific moisture content, blended and mixed with Bitubind in a pan mixer, until the three products are completely blended.

7. Purchasing, Suppliers and Manufacturing

It is the policy that only suppliers of proven acceptability must be used by the Manufacturing Facilities. All products must comply to the specification and quality as was prescribed by Universal Blending. Any deviation from the original specification must be reported to the Project Director for his approval;

Suppliers must provide a Certificate of Conformance to specification.

8. Product Identification, Control and Traceability

Roadsaver Cold Asphalt mix is packaged in a 160micron PVC bag for easy handling complete with directions for use. Contact details and certification are provided. The material is a pliable black mix.



Each bag will be tagged with a proper barcode tag containing all the data and batch numbers of the materials used in the manufacturing of the specific bag including the date of manufacturing.

9. Handling, Storage, Packaging, Preservation and Delivery

After the manufacturing process, Roadsaver will be packed, weight checked and sealed in a 25Kg Pvc Bag. The bags must be stacked 6 per level on a standard 1200 x 1200 pallet. Seven layers (42 bags) can be stacked totalling 1025Kg, alternating the direction of the bags as indicated on the photo below.

On a 4-way block pallet Roadsaver can be stacked to a maximum of 10 layers, totalling 1500Kg.

Roadsaver (cold Mix Asphalt) has a shelf life of 6 months. Bitubind, sealed in a drum and stored in a cool ventilated storage area has a shelf life of 2 years.

The preferred method of delivery would be on pallets packed in the prescribed manor. Roadsaver can be transported individually with the condition that bags are packed flat and layered alternating the direction of the bags as indicated on the photo below.

With Special arrangement Roadsaver can also be delivered in bulk





In summary, the factors that differentiate Roadsaver from other pothole materials are:

- It is self-priming
- No tack coat is required except in very large areas
- Limited preparation of damaged areas is required before application
- If damaged area is less than 1 square meter in size, no compaction is necessary, as it can be left for traffic to compact only large areas need compaction, Roadsaver does not stick to the compacters
- It has a long shelf life, in excess of 12 months
 - It can be used in extraordinary climatic conditions, i.e., extreme heat and cold as well as in rainy weather. It is cost effective, and can be manufactured anywhere in the world where there is a refinery and aggregate available
- After repairs, roads can be immediately opened to traffic • It can be used to repair any type of road surface, e.g., concrete, bricks and asphalt surfaces
- It never cracks around the repaired areas, unlike other hot or cold asphalt products, which must be treated with an emulsion to keep water out
- No heat is required in the manufacturing process

10. Our Contact Details

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