

ROMIX SOILFIX SRB-5

Road base layer stabilizer

Product data sheet

COMPOSITION

SoilFix SRB-5 is a water-based polymer solution specifically developed as an admixture for the stabilization of sub-base and base layers in heavily trafficked roads, as well as base layers and surface layers in low to medium trafficked roads. The final product can be sealed with **Romix PNS (Polymer Natural Seal)** – a natural clear waterproof coating or **Romix PRS (Polymer Road Seal)** - a black top appearance waterproof coating, or **Romix BTA (Black Top Asphalt)** – a “Black Top” water based cold asphalt, or any traditional bitumen or asphalt wearing course seal.

Romix SoilFix SRB-5 is inherently different to standard Polymer Products. Research has shown that Polymer Emulsions on their own are not suitable for soil stabilization unless a high percentage (5% or more) is used. Due to the relatively high cost of Polymer Emulsions, the cost of applying Polymers only, becomes prohibitive.

The unique backbone Polymer used in **Romix SoilFix SRB-5** is produced exclusively for Romix. **Romix SoilFix SRB-5** has been formulated together with several additives to enhance the capabilities of the product :-

- Improved Water Resistance
- Flexibility of the stabilized layer, eliminating cracking
- Lubrication of soil particles to improve compactibility and increased density
- Aiding the migration of excess polymer particles into sub-base and sub-grade layers
- Limiting the application rate to 0,5% (zero comma five percent), reducing the quantity of product required to exceed specifications, thereby also reducing the total cost of building a **Romix** road.

FEATURES AND ADVANTAGES

- Water based – will not contaminate bowsers and tanks.
- Environmentally friendly – will not leach into the environment once cured.
- Decreasing the total Carbon Emission to only 2% of the traditional cement or lime method. (Ergomax Report)
- Can be applied to most soil types including sandy soils and clays (soil modification may be required).
- No specialized heavy equipment required – grader or tractor & plough, water cart and compactor are all that is needed.
- Improves the bearing strength of some materials up to and in excess of 200% (CBR)
- Meets and exceeds the minimum UCS (Unconfined Compressive Strength) requirement of 750 Kpa.
- Very high tensile strength – yet flexible.

- Minimum disruption to traffic during construction. Roads can be opened to traffic immediately after construction.
- Quick construction – up to one kilometer (6 meter wide) per day can be stabilized. Using advanced recycling equipment, the construction process can be speeded up even more.
- No, or minimal maintenance such as grading required therefore saving vast amounts of money.
- Contains no cement or lime.
- In-situ soils can be used obviating the need to import costly materials over long distances.
- SRB-5' proven unique ability to migrate downwards into untreated sub-base, and sub-grade layers binding materials, allows for construction of single layered roads, with multiple layer performance.

PREPARATION

- Rip the area to a depth of 200mm for heavily trafficked roads, 150 mm for medium trafficked roads, and 100 mm for low trafficked roads.
- Grade or windrow the soil in order to break large clods of soil.
- Level the soil once grading has been accomplished
- Demarcate the area to be stabilized (maximum 250 linear meters at a time)
- Pour 0.5% **SoilFix SRB-5** by weight of the soil (MOD), in a water tanker or bowser. Pour double the volume of water into the bowser (100% dilution). [or more depending on the moisture demand of the soil]. Application rate is directly related to the depth of stabilization :-
 - 200mm depth - 2 liters per square meter
 - 150mm depth - 1,5 liters per square meter
 - 100mm depth - 1 liter per square meter
- Spray the diluted product over the prepared area.
- Mix the product into the soil thoroughly with a grader or plough – adjust the moisture content to approx. 1% above Optimum (OMC).
- Level the mixed soil.
- Compact the soil thoroughly to approx. 98% or higher MOD AASHTO modified.
- Cut and profile the road surface with a grader.
- Final compaction – 8 passes on full vibration mode.
- The road can be opened to traffic immediately after compaction.
- The surface can be optionally coated with **Romix PNS (Pneumatic Natural Seal)** or **Romix PRS (Polymer Road Seal)** or **Romix BTA (Black Top Asphalt)** in order to waterproof and drastically reduce wearing and gravel loss.
- A slurry mix can be mixed using crusher dust, water and **Romix BTA (Black Top Asphalt)** and squeegeed over the road surface after it has been “tacked” with diluted BTA.
- For larger areas the slurry should be applied by a slurry truck.

Using Recycling Machines – i.e. Wirtgen or CAT

- Preparation of the area as per traditional method described above
- Two water bowsers can be used – one bowser filled with **Romix SoilFix SRB-5** only, and the other water bowser with clean water.
- Connect each bowser to its own suction pump on the Recycler.

- Set the recycling depth
- Set the **SRB-5** pump to the dosage described above, dependent on the depth of application (2 liter / 1,5 liter or 1 liter per m²)
- Adjust the level of water intake on the second pump to accomplish **OMC (Optimum Moisture Content)**.
- The recycling machine will automatically level the material behind the machine.
- Use a padfoot roller directly behind the Recycler for initial compaction.
- Grade, level and cut the compacted material.
- Skim the mixed material
- Compact the layer with a smooth drum roller and apply the desired seal in the appropriate manner two days after final compaction.

MIX YIELD

At a depth of 200 mm an application rate of between 0.5% by weight of aggregate, 2,0 litres of SoilFix SRB-5 is required (MOD 2000). At 150 mm depth, 1.5 liter SoilFix SRB-5 must be used, and at 100mm depth, 1 liter per m² is required. Therefore, for each 100mm layer of material, 1 liter per m² is applied.

For waterproof wearing courses, spray 0.2 liter per square meter of **Romix PNS (Pneumatic Natural Seal)** diluted with 0.8 litres water for natural soil surfaces, such as found in Game Lodges and farms or **Romix PRS (Polymer Road Seal)** for residential areas.

3.6 liters **Romix BTA (Black Top Asphalt)** (30mm thick) per square meter for black top asphalt surfaces as found in urban areas.

For slurry mixes, refer to **Romix BTA (Black Top Asphalt)** Product Application Data Sheets.

TECHNICAL DATA

APPEARANCE	BROWN LIQUID WITH AN AMMONIA
	ODOUR
SPECIFIC GRAVITY	1.02
Ph	10.2
FLASH POINT	NIL
PHYSICAL FORM	LIQUID
PACKAGING	200 Lit, 1,000 Lit Minibulk, Bulk Tanker

Manufactured in South Africa by ROMIX Industries (Pty) Ltd. All recommendations are based on laboratory tests and in-field use experience, and are, to the best of our knowledge, accurate. Since conditions of actual use are beyond our control, all recommendations are made without warranty, express or implied.