

New advanced chemical road stabiliser Titan designed by RST Solutions specifically for unique composition of red soils

RST Solutions launches new and advanced chemical road stabiliser Titan for construction and reconstruction of strong, durable unsealed roads built in red soils

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/EINPresswire.com/ -- A new chemical road stabiliser designed specifically for the construction and maintenance of unsealed roads built with red soils has been developed by leading fine particle specialist [RST Solutions](#).



A road in the Pilbara region treated with Titan by RST Solutions remains in excellent condition after rain.

[Titan](#) is an advanced soil stabiliser designed specifically for red soils to improve the performance and condition of unsealed road pavements constructed with these materials.

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Applying Titan at the base-course and throughout earthworks stabilises the red soil, improves pavement structure and prevents deformation of subgrade structures for roads and hardstand areas.”

RST Solutions Operations and Technical Director David Handel

Red soils are known for being soft and moisture sensitive, with high potential for collapse if untreated. Classed as silty sand, which is mostly sand with small amounts of silt or clay, red soils require specialised treatment when used in the construction of roads and other infrastructure.

RST Solutions Research and Development team, led by the company's Operations and Technical Director David Handel, designed Titan for binding and stabilising red earth soil to increase strength and strain of this specific type of material.

“Red earths are a challenge for road builders due to the variability and difficulties in quality control, as it typically has high void ratio and low density

which increases the potential for collapse when used in construction,” Mr Handel said.

“Red soil has low plasticity because it holds very little moisture content, which makes it very vulnerable to erosion in the wet and dust when dry. If used as a primary material for construction without specialised treatment, red soil will cause all sorts of structural issues.

“From Pindan soils found in the Pilbara region of Western Australia, to the red soils of Africa, the red soils of China, and the terra rossa soils of Mediterranean regions, red soil across the world is characterised by their reddish colour and high iron content however, the specific characteristic of any soil depends on factors such as climate, geology and vegetation in the area.

“We developed Titan specifically for red soils to increase structural strength from the base-course up through the subgrades to the binding of unsealed surfaces, and in water cart applications for ongoing surface maintenance.

“Titan increases surface resistance to water and minimises the capacity for water ingress that will cause structural weaknesses. Applying Titan at the base-course and throughout earthworks stabilises the red soil, improves pavement structure and prevents deformation of subgrade structures for roads and hardstand areas.

“This offers added economic benefits by increasing the lifetime of all types of roads and pavements, whether sealed or unsealed, and furthermore it is a high-quality alternative to using bitumen or cement.”

Titan is a polymer stabiliser that improves soil mechanical properties through internal waterproofing achieved by coating the aggregate with a polymer film that strengthens and



Titan is applied throughout earthworks to stabilise red soil, improve pavement structure and prevent deformation of subgrade structures for roads and hardstand areas.



Titan was designed by RST Solutions specifically for red soils to increase structural strength from the base-course up through the subgrades to the binding of unsealed surfaces.

bonds the soil particles.

Benefits of using Titan to treat red soil include a high resistance to water and significant improvements to physical properties including packing density, elastic modulus, hardness, cohesion and fracture toughness.

Titan is an advanced treatment for red soils proven to support roads and pavements under extreme conditions, including flooding and high volumes of heavy vehicle traffic.

Immediate results have been reported as “remarkable”, with Titan’s unique ability to form mechanically high-resistant road pavements that remain flexible and in good condition, even in extreme wet weather, helping keep unsealed roads safe and open to traffic during wet seasons.

RST Solutions offers a suite of [high-performance products](#) that target a variety of issues associated with fine particle management in response to companies seeking more project optimisation strategies for a range projects.

Advanced technology developed by RST Solutions for the construction of quality unsealed roads and pavements assists companies in achieving higher levels of dust control and strengthening against rain and wind erosion.

By adjusting the chemistry to target the specific materials being used on site - which could be anything from high plastic clays to very low plastic silt - the whole road construction process is significantly improved, resulting in more durable, weather resistant roads and pavements that keep productivity at optimum.

After selecting the most appropriate methods, RST Solutions adjusts the chemistry for compatibility to site-specific material types, infrastructure forms and seasonal changes to assist in managing unexpected material qualities, construction types and shifts in weather patterns.

By taking into consideration a site’s application equipment and systems, as well as construction processes, RST Solutions customises its range of advanced technologies to solve site-specific issues caused by all types of fine particle issues from dust to mud, silt to sediment.

This expertise comes from three decades of experience gained from developing solutions for the many various fine particle challenges presented across numerous industries, processes and material types.

RST Solutions is an Australian business operating internationally, with presence and projects currently in the United States of America, China, India, Africa, the United Arab Emirates, Canada, Panama, Mexico, Colombia, Chile, Brazil, Peru, Argentina, Papua New Guinea, New Caledonia, New Zealand, Indonesia, The Philippines, Malaysia, Croatia, Lithuania and Mongolia.

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