

RST branches out to specialise in dust control technology for tunnels and underground mines



Gold Coast, Dec 21, 2020 ([Issuewire.com](https://www.issuewire.com)) - Global industry leader in fine particle management, Reynolds Soil Technologies (RST), has expanded its range of services to specialise in comprehensive dust control solutions for underground mining and tunnelling.

In response to industry demand for preventative measures to suppress dust emissions from underground mining and tunnelling activities, RST has developed advanced methods for sealing loose dust to walls and roofs as well as roads and hardstand areas for longer periods of time, reducing the need for ongoing watering programs.

By targeting specific areas and activities with customised products and applications, RST assists operators of underground mines and tunnelling activities to successfully manage their dust emission challenges while delivering significant operational benefits, personnel protection and regulatory compliance.

“Tunnels and underground mines require a broad range of targeted control methods to adequately control the hazard of dust emissions,” RST Operations and Technical Director David Handel said.

“Dust emissions from underground mining and tunneling activities move around the tunnel systems by ventilation and machinery air displacement with unsafe levels of build-up occurring on walls and roofs.

“Without targeted treatment, ongoing air displacement causes the dust to become dislodged and become airborne again.

“As part of our overall strategy to mitigate dust, each surface is targeted separately with specific dust suppression strategies to minimise the circulation of dust.

“Our dust suppression methods are customised with specialised chemistry based on determining factors such as material type, water quality, application procedures, duration and durability.”

Mr Handel said spraying tunnel walls and roofs with water was inefficient as the water-saturated the roads and dried very fast on the walls and roof surfaces with the rising of hot air, which quickly returned the surfaces to their natural state.

He recommends adding an advanced crusting agent to the water for spraying onto the walls and roofs to seal and bind loose dust to the rock surface, which remains active for much longer periods of time and reduces the need for ongoing watering programs.

RST’s recommended product for this treatment is the company’s advanced formula [Guardian Dust Binder](#) due to its versatility, cost-effectiveness and long-term dust mitigation results.

The team identified its products; [RT20 Dynamic Stabiliser](#), [Shield All Weather Road](#), [Guardian Road Binder](#) and [Zero Waterless Dust Suppressant](#) for the treatment of roads and hardstand surfaces in underground mines and tunnels, with treatments tailored and applied in conjunction or separately.

RST also strongly recommends using a foaming dust suppressant for materials handling, which is far more effective than plain water as the foam expands water and binds dust particles for greater lengths of time so significantly less water is required to achieve the highest levels of dust control efficiency.

For this purpose, a fine particle specialist will assess the materials being handled and select the suitable treatment; [RT60 Spray Plus](#) or [Hi-Foam](#) dust suppressants, for application at loading bins, crushers or belt transfer points to suppress dust where the falling material opens up.

With operational challenges and environmental conditions differing at every site, RST specialises in customising products and services to suit various requirements for dust control, surface stabilisation and erosion mitigation.

The company supplies a complete range of product dosage, application and spray equipment, however before RST specialists decide which product is best suited for an operation, they evaluate if any existing spray system could be implemented in an ongoing maintenance program.

RST has worked closely with process chemists to develop its range of unique dust suppressant formulas to significantly improve dust control efficiency of water spray systems already in use to advance their effectiveness in capturing airborne dust and improving material dust extinction moisture levels without affecting the processing results.

Material type, application equipment and processes, climatic conditions and water availability and quality are among the factors considered by RST when delivering the right solutions for clients, backed by the company's 30 years in the field of fine particle management.

Three decades of extensive research and development of products and methods to repair and mitigate a broad range of mine site dust management challenges gives RST the expertise and knowledge to provide mine operators with cost-effective and environmentally-friendly solutions, across a whole range of fine particle issues from plant to port.

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

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