

## Fine particle specialist Reynolds Soil Technologies (RST) develops new solutions for autonomous mines

In support of advances in mining technologies, fine particle specialist RST has developed advanced new polymer products to address a range of issues brought about by automated mining vehicles.



**Gold Coast, Jul 23, 2020** ([Issuewire.com](https://www.issuewire.com)) - [Reynolds Soil Technologies \(RST\)](https://www.issuewire.com) is leading the way with solutions for automated mining operations by delivering road stabilisers and dust control solutions specifically designed for haul roads supporting driverless trucks on 24-hour haulage cycles.

Cutting-edge [dust control and mitigation solutions](#) have been developed by RST for both above and underground mines to minimise haul road dust and maintain peak road condition for longer periods of time to support driverless haul trucks in operating at an optimum level.

RST Operations and Technical Director David Handel say the company's Research and Development Program has been observing autonomous trials at mine sites for many years to understand how automated mining programs operate to support the development of specific technology to address associated issues.

“When RST started developing solutions for automated operations, we looked at ways to improve the operations of unmanned trucks to address some of the new challenges presented as compared to a fully manned operation,” he said.

“What was interesting to us in the early days during the trials was that the truck’s autonomous system perceived dust as a wall so it would stop and shut down the truck when it drove into dust from the vehicle in front.

“We saw the need for new technology aimed at controlling dust for longer periods of time on haul roads coping with extremely high volumes of heavy vehicle traffic.

“Driverless haul trucks operate 24 hours a day, placing extreme pressure on mine roads and making it difficult for maintenance crews to keep them in peak condition.

“We focused on developing and modifying road stabilisers and dust binders to improve the structural integrity of haul roads with a simple spraying method, with compaction being achieved by autonomous trucks in operation.”

RST’s Research and Development team were aware of the operational safety needs for crew members in road maintenance vehicles and water carts on haul roads where autonomous haul trucks were operating.

RST recognised the need to compliment the operational use of haul roads by driverless trucks and the need to maintain a good running surface and manage dust on the same roads.

Mr Handel says long-term dust suppressants are not the total answer for managing autonomous haul road conditions due to the roads being unavailable at times to allow for traditional grading and maintenance practices.

“Unsealed haul roads must be kept in operational condition with ongoing dust mitigation as well as regular spillage removal and targeted maintenance to keep good running surfaces,” he said.

“Our Research and Development team found that haul roads, when treated with [RT20 Dynamic](#) road stabiliser, stayed in good condition for longer periods of time with reduced dust emissions, which enabled the smooth running of autonomous vehicles.

“RT20 responds extremely well to traditional grading practices, but it also delivers haul road surfaces that hold their structural integrity for longer and require less ongoing maintenance and dust control, which means less spillage to remove, so, therefore, saving a lot of maintenance time and cost.”

RT20 Dynamic is a highly advanced liquid soil compaction aid developed by RST that can be simply watered onto the road material with compaction conveniently carried out by autonomous vehicles driving on the applied product during normal operations, so reducing the need for regular and intense road maintenance.

RST has also developed a new Guardian suite of polymer technology products for both above and underground autonomous mining operations to significantly strengthen road surfaces for long-term resistance to the damaging effects of rain and heavy vehicle traffic.

[Guardian Road Binder](#) and [Guardian Dust Binder](#) are proving different to other products available on the

market for dust control and road stability due to their versatility, cost-effectiveness and long-term mitigation results.

Since the release of Guardian Road Binder to the market around 18 months ago, RST has generated sales of 300 tonnes to date as the products are introduced to various markets.

Guardian Road Binder and RT20 Dynamic are just two of many innovative products developed by RST to assist companies in the mining and quarrying, civil construction and agriculture industries throughout Australia and across the globe.

New solutions for dust, erosion and other fine particle issues caused by automated mining processes and traditional mining processes are currently being explored by RST's Research and Development Program.

With more than three decades of experience developing cost-effective, dust control technologies and solutions for the mining industry, RST has built a reputation as an industry leader on haul road development and dust control.

RST is an Australian business operating internationally, with 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.

For more information, contact Reynolds Soil Technologies on (07) 5522 0244 or visit [www.rstsolutions.com.au](http://www.rstsolutions.com.au).



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