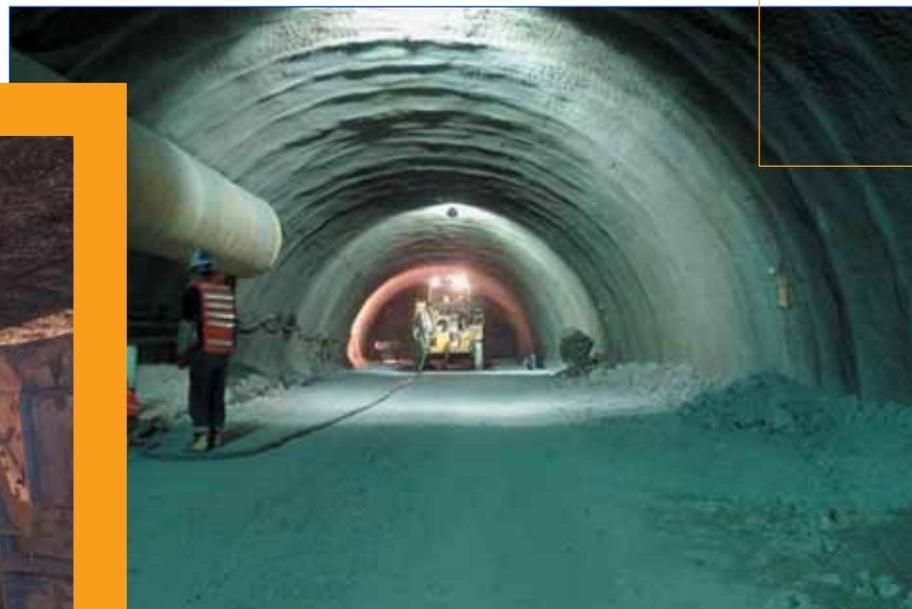




A Division of River Sands Pty Ltd

Concrete Accelerators, Admixtures, Dry Shotcrete and Grouts for **Mining and Tunnelling Applications**



better products
outstanding **results**

High Performance Accelerators

New Generation Accelerators for Shotcrete



Minespeed F1

ACS Minespeed F1 is a new generation, high performing, alkali free liquid admixture formulated for use in underground mining and tunnelling applications.

This new generation formulation provides a number of benefits to the shotcrete application process including:

- > high early strength gains in shotcrete
- > a low rate of rebound loss
- > excellent bonding characteristics
- > a significant improvement in the early compressive strength gain of shotcrete.



Anti-flocculation enables bulk storage on site

The extremely robust formulation of Minespeed F1 enables the material to be stored for extended periods of time in hot climates without separating.

Its non settling characteristics allow it to be stored in 30 000 litre bulk storage containers. This offers major advantages to the mine owner and the shotcrete contractor including:-

Minimal need for IBC' or Plastic 1000 litre pods on mine sites

Disposing of empty IBC's is a time consuming, costly and environmental concern to mine operators and contractors. Bulk storage of Minespeed F1 on the mine site overcomes this issue.

Fast unloading and dispensing for greater productivity

The cumbersome and time consuming task of decanting 1000 litre containers of accelerator is eliminated. Delivery of shotcrete admixture in bulk allows a relatively quick and seamless transfer of materials from truck to site.

Minimal wastage of materials

Traditional shotcrete accelerators fall out of suspension and create a non-usable sludge at the base of the IBC. This can amount to as much as 200 litres in each 1000 litre IBC.

In addition to being a waste of money, the sludge creates the potential for pump blockages and costly delays during shotcrete application.

Traditional methods can also create the potential for the remaining solution to be less potent in accelerating the set of the shotcrete - as the active ingredient sits dormant in the base of an IBC.



Eliminate wastage of accelerators with ACS Minespeed F1

and Admixtures



Concrete Admixtures

In addition to the Minespeed F1 and Minespeed Powder Accelerator, ACS provides a complete suite of admixtures for shotcreting applications. These admixtures include:

Mine Mix Enhancer

A ready to use, high performing admixture designed to improve the workability of concrete particularly if it contains poor aggregates, low cement content or lower water retention abilities.

Mine Stabiliser

A liquid admixture which effectively suspends the cement hydration process in shotcrete - thereby extending the shotcrete's useful life without affecting performance.

Mineflow M

A ready to use, liquid high range water reducer for shotcrete. Mineflow M improves the workability and pumpability of shotcrete without causing segregation.

Dry Shotcrete and Construction



ACS Shotcrete Admixtures are ideal for above ground and below ground stabilisation of walls.



Minespeed Powder Accelerator

ACS Minespeed Powder Accelerator is available for those unique situations where a dry admixture is required to complete a job.

Added at a dose rate of around 4%, ACS Minespeed Powder is ideal for dry-process shaft lining and tunnelling, offering added convenience for transportation, storage and placement of shotcrete.

The unique formula enables shotcrete to set rapidly and achieve high early strength, while providing a low rate of rebound loss.



Factory Produced 'Dry' Shotcrete Systems

ACS provide dry, preblended shotcrete and gunite for metalliferous and coal mining applications as well as tunnels.

The material is available in 20kg paper sacks or one tonne bulker bags.

We can produce approximately 150 tonne of this material per day at our high capacity dry mix bagging plant in Brisbane so your orders can be filled quickly and efficiently.

In contrast to site mixed shotcrete, our factory produced shotcrete and gunites are engineered with high quality washed and tightly graded aggregates to ensure excellent compaction, high early strengths, minimal rebound and easy pumping for optimum on site performance.



Grouts



Dry mix products are pre-bagged or made to specification in our high volume, high packing capacity plant in Brisbane.



Construction Grouts

ACS also offer a range of regular and high performance grouts for civil and mining applications. High early strength (50MPa in four hours) cable grouts and more economical versions for general use are available.

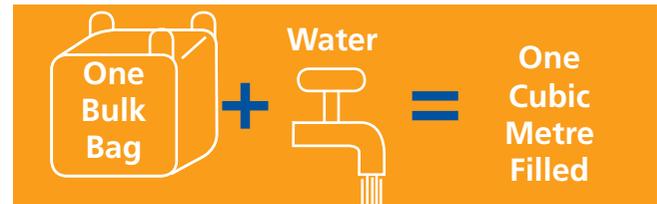
Grout Fluidifier

Packed in water soluble bags, this concentrated additive is formulated for direct addition to the on-site agitator, providing greater handling and flowability properties for cost effective on-site sand and cement based filling grouts.

Void Fill Grout

ACS Void Fill Grout is an expanding, low strength grout for the bulk filling of cavernous underground areas.

Its light weight, non-shrink, and excellent pumpability properties make it ideal for rapid void filling and strata consolidation.



Waterproofing Membranes and Liners

For on-site water tanks, reservoirs, rooftops and tailing ponds, ACS can provide a full range of liquid, torch on and EPDM liners.

ACS premium Waterproofing membranes can be utilised for a variety of construction applications.



Neumann Contractors — Sand Dredging and Processing. Neumann Dredging dredged the famous Gold Coast Seaway channel.



River Sands — Dry cement products, filter media, concrete colours and admixtures.

Applied Concrete Solutions — part of the Neumann Group

Applied Concrete Solutions (ACS) specialises in supplying to the mining, tunnelling and civil construction industry around Australia. ACS is a division of River Sands Pty Ltd, a fully owned company in the Neumann Group.

The Australian owned Neumann group is privately owned and is a collection of eight companies operating in the mining and civil construction industry segments.

Established in 1955 the group now employs over 900 people throughout Australia and has an annual turnover of approximately \$600 million.



Cut away
section



Neumann Steel — Manufacturer and supplier of reinforcing steel to the construction and building industry throughout Australia.



Currumbin Minerals — Mineral sand mining and milling.



Neumann Property — Residential and industrial land estates and masterplanned communities.



Neumann Contractors — Land Reclamation, Civil Contracting, Land Development and Dredging.



Neumann Petroleum — One of Australia's largest privately owned fuel providers.





Logistical solutions for efficient delivery

ACS operates a decentralised warehousing operation to provide quick despatch to mining sites around Australia.

In addition to our eight hectare factory site in Brisbane we have warehouses in all capital cities. Materials are delivered directly from our factory to your site or transferred to our interstate warehouses in readiness for your orders.

Our friendly office staff will process your orders and ensure your products are despatched on time.

Materials can be delivered on an FIS basis or alternatively we can utilise your preferred freight supplier.



Tailor made products to fit your unique site requirements

In addition to the above range of standard products our technical representatives will consult with you and our laboratory to develop and formulate cement based or liquid based products to meet the unique circumstances and applications that arise on your mining site.



Well established manufacturing knowhow to ensure consistent on-site performance.

ACS products are manufactured at our Brisbane based factory in accordance with our Quality Assurance program certified as complying with ISO 9001.

Our on-site five person NATA registered laboratory ensures that products are manufactured to specification. Our laboratory and research personnel are highly experienced in all aspects of concrete technology and associated products, and are available as a resource and source of knowledge for our customers.

In addition to normal quality control operations, the laboratory staff are employed in ongoing research, field trials and development work. These staff members also work with our customers to fine tune existing products and/or develop new recipes to more closely match the individual requirements of your unique site.



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