



CONSTANT PERFORMANCE

# ACS RAPID SET SHOTCRETE

## NEW AGE TECHNOLOGY SHOTCRETE

### DESCRIPTION

ACS Rapid Set Shotcrete is a pre-packaged multi-component cement based shotcrete mix for use in dry-mix processes.

ACS Rapid Set Shotcrete is made with accurately mass-batched blends of Portland cement, silica fume, sand, coarse aggregate and powdered accelerator.

It has been specifically designed for applications that require fast setting characteristics used in mining, tunnelling and civil projects.

### RECOMMENDED USES

- Mining applications, including ground support and lining of portals, shafts, drifts, raises, loading pockets, ore passes and underground chambers
- Ground support and slope stabilization
- Linings of tunnels and connecting shafts
- Support and formwork for retaining walls
- Concrete repair to structures such as bridges, dams, sewers, canals, reservoirs, and cooling towers
- Repair to marine structures including wharves, jetties, piles, and sea walls
- Repair to buildings and structures such as parking structures, grain silos, and chemical handling facilities

### FEATURES AND BENEFITS

ACS Rapid Set Shotcrete offers many advantages to owners, contractors, and engineers particularly in situations where conventional formed concrete construction would not be appropriate or cost effective. The main advantages are:

- Supplied ready to use under stringent quality control standards
- Rapid setting characteristics provide high early set time
- Ease of application in dry-mix spray systems
- Elimination or reduction in formwork
- Suitable for overhead applications up to 400mm thick
- Greater thickness build-up in a single pass relative to conventional shotcrete, particularly in the dry-mix process
- Easily pumped and applied
- Fast setting time

- Substantial reductions in rebound, particularly in dry-mix processes
- Superior bond strength
- High early strengths to reduce down time
- Easily pumped using the wet-mix process
- Good working time

### PACKAGING

Available in 20kg bags or 1 tonne bulk bags.

### COVERAGE RATES

One 20kg bag of ACS Rapid Set Shotcrete mixed with the required water will yield approximately 10.2 litres or 0.0102m<sup>3</sup>.

Calculations of coverage need to include provision for rebound waste and any waste during the cut off finishing procedure.

The approximate allowance for rebound is 5 - 10% not including cut-off.

This rebound percentage has been calculated based on the shotcrete being applied by an experienced applicator during ideal weather conditions.

### TECHNICAL PROPERTIES

Age	Compressive Strength (MPa)	Flexural Strength (MPa)
1 day	10 - 12	3 - 5
7 days	30 - 35	8 - 10
28 days	40 - 45	10 - 12

Note: Reasonable variations to the above data can be expected, as strengths may vary due to job site conditions, weather, curing procedures and levels of expertise during application.

## APPLICATION

The surface to be shotcreted shall be prepared by removing all unsound concrete and debris.

When using ACS Rapid Set Shotcrete in structural repairs ensure that the substrate is clean and properly prepared. Additionally the repair zone should be saturated with clean water for a minimum of 5 - 7 hours prior to shotcreting.

Mix ACS Rapid Set Shotcrete with approximately 1.8 - 2.3 litres of water per 20kg (230 litres / m<sup>3</sup>).

ACS Rapid Set Shotcrete can be applied in depths of 10 - 400mm in one pass depending on the shotcrete method used and substrate and weather conditions.

## CLEANING

All tools should be rinsed with water immediately after use to remove all traces of ACS Rapid Set Shotcrete.

## STORAGE

If kept dry and stored in its original condition, ACS Rapid Set Shotcrete will keep for at least 12 months. The shelf life of the product may be reduced if subjected to high temperatures and high humidity.

## HEALTH AND SAFETY

During use, avoid inhalation of dust and contact with the skin and eyes. Wear suitable clothing, gloves, eye protection and respiratory protective equipment.

If contact with the skin occurs, thoroughly clean the area with plenty of fresh water and soap. In case of contact with the eyes rinse with plenty of fresh water and seek medical advice.

If swallowed, seek medical attention immediately - do not induce vomiting.

For further information consult the Material Safety Data Sheet (MSDS) and read the product label carefully before use.

MSDS documents are available by phoning 1800 077 744.



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### PLEASE NOTE

The information given in this data sheet is based on our current knowledge of the product when properly stored, handled and applied. We cannot guarantee that the product will be suitable, effective or safe when used for any purpose other than its stated uses.

To the extent that it is lawful, we exclude warranties implied by law and limit our liability to the cost of replacing the product. We accept no responsibility for loss or injury caused by improper use, incompetent preparation, inexpert or negligent application, or ordinary wear and tear.

Service or advice given by our staff should not amount to responsibility for the project - since the owner, or their contractor (and not River Sands), is responsible for procedures relating to the application of the product.

APPLIED CONCRETE SOLUTIONS  
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