

Technical Data Sheet (TDS)

VShot HS

Description

VShot HS is a pre-packaged, ready to use, dust-free shotcrete mix for wet applications utilising the Ventsec Wet Applicator Pumping System. Engineered specifically for high strength.

VShot HS is extremely cohesive, has good early and increasing strength and produces a linear flexural strength. A primary advantage is increased development and potential project finalisation.

The innovative use of specially selected raw materials allows VShot HS to deliver the right material at the right time through the Ventsec Wet Applicator Pumping System to eliminate potential dust exposures, to increase strength development during application.

VShot HS has been specifically established for applications in mining and civil industries. Customers may request poly or steel fibres to suit their specific application. Corrosion inhibition available on request (CI).

Recommended Uses

VShot HS is recommended for use in all mining or civil applications where a dry shotcrete mix is deemed appropriate.

- Underground mining support & lining, Ventilation sealing and water control.
- Ground & embankment stabilisation
- Concrete repairs to buildings, bridges, marine structures, pipework etc.
- Tunnel linings & repairs
- High Strength project requirements

Features & Benefits

VShot HS is a cost effective, time saving alternative to conventional concrete applications. Without sacrificing quality of materials, the advantages of using VShot HS are as follows:

- Easy application in the Ventsec Wet Applicator pumping system.
- High build out
- High strength shotcrete
- Dust Free Application

Performance Data

Setting Times

Setting should not be confused with hardening, which refers to the gain in mechanical strength after the certain degree of resistance to the penetration of a special attachment pressed into it.

*Initial set – 120 mins

Initial setting time is the time when the paste starts losing its plasticity. Initial set times are important for transportation, placing and compaction of cement concrete.

*Final set – 240 mins

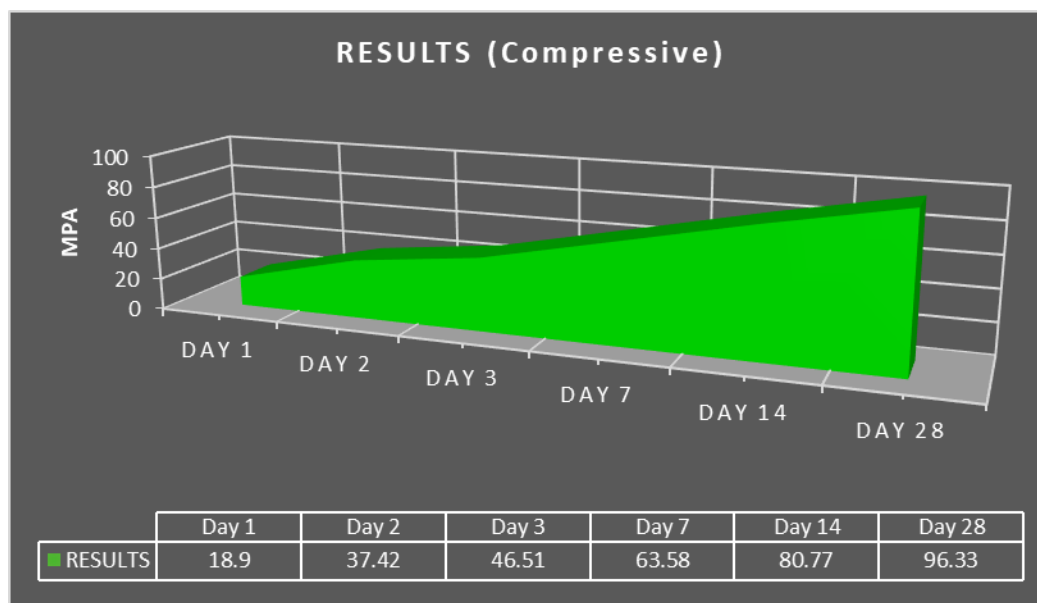
Final setting time is the time when the paste completely loses its plasticity.

It is the time taken for the cement paste or cement concrete to harden sufficiently and attain the shape of the mould in which it is cast.

Determination of final setting time period facilitates safe removal of scaffolding or form.

Compressive Strength

VShot HS has standard early Strength reaching in excess of 90 – 120Mpa in 28 days. This material has a Flexural strength of 6.45Mpa tested at 28 days and a typical shrinkage average of 510 micro strain over 56 days.



*Variations are to be expected as a result of changing site conditions, weather, quality of preparation, level of expertise during application & curing. Results from independent core testing.

Application

The surface to be sprayed should be prepared by removing all traces of unsound concrete, dust and debris.

For structural repairs, ensure the area has been saturated with clean water. Ensure this occurs a minimum of 7 hours prior to shotcrete application.

Mix VShot S with approximately 0.11 – 0.14 litres of water per 20kg.

VShot S can be sprayed to depths of 10-100mm in one pass depending on weather conditions and operator competence.

Cleaning

Rinse all tools & equipment with clean water immediately after use, removing all traces of VShot HS.

Storage & Shelf Life

If VShot HS is kept in its original packaging in a dry environment, shelf life of 6 months is to be expected.

This time may be reduced if the product is subject to high temperatures or humidity.

Bulk bags are expected to remain covered in plastic until use.

Packaging

VShot HS is packaged in 20kg bags or 600kg, 1000kg and 1200kg bulk bags. Other packaging options can be requested.

Health & Safety

- Avoid contact with skin and eyes. Wear suitable protective clothing.
- Avoid inhalation or ingestion.
- In case of contact with skin or eyes, rinse immediately.
- Seek medical attention immediately if ingested.

Disclaimer

The technical information and application advice summarised in this document is based on our current practical knowledge.

Intending users should read this TDS as well as the SDS and consider the information provided in the context of how the product will be handled and used in the workplace, including in conjunction with other products.

We accept no responsibility for loss or injury caused by improper use, incompetent preparation or ordinary wear and tear.

Our responsibility for product sold is subject to our standard terms and conditions; no warranty expressed is implied as Ventsec has no control over mix design, handling or use of the product. Ventsec retains the right to update this TDS without prior notice.

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