

Technical Data Sheet (TDS)

FibreTec

(High Performance Shotcrete)

Description

FibreTec is a pre-packaged, fibre enhanced, ready to use, shotcrete mix for wet applications utilising the Ventsec Wet Applicator Pumping System. Engineered for early adhesion and pumpability.

FibreTec is extremely cohesive, has good increasing early strength and performance. The addition of specially selected fibres improves the strength and durability of the finished wet applied shotcrete.

The innovative use of specially selected raw materials allows Ventsec to deliver high standard product at the premium mix ratio every time through our Wet Applicator Pumping System, eliminating potential dust exposure enhancing parallel tasking opportunities for operational and environmental benefit.

FibreTec has been specifically designed for applications in the mining, tunnelling, and construction sectors. FibreTec contains high dispersion micro fibres to ensure homogeneity and durability of sprayed shotcrete. A corrosion inhibitor (CI) has been added to the mix to inhibit ongoing oxygenation on steel structures.

Recommended Uses

FibreTec is recommended for use in mining or civil applications where a fibre reinforced, corrosion inhibited dry shotcrete mix is deemed appropriate.

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

Features & Benefits

FibreTec is a cost effective, time saving alternative to conventional shotcrete and dry Gunit applications. Devoid of sacrificing quality of materials, the advantages of using FibreTec are as follows:

- Effortless application in dry to wet mix shotcrete Wet Applicator pumping system.

- Medium setting
- High build
- 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 – 45 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 product.

***Final set – 90 mins**

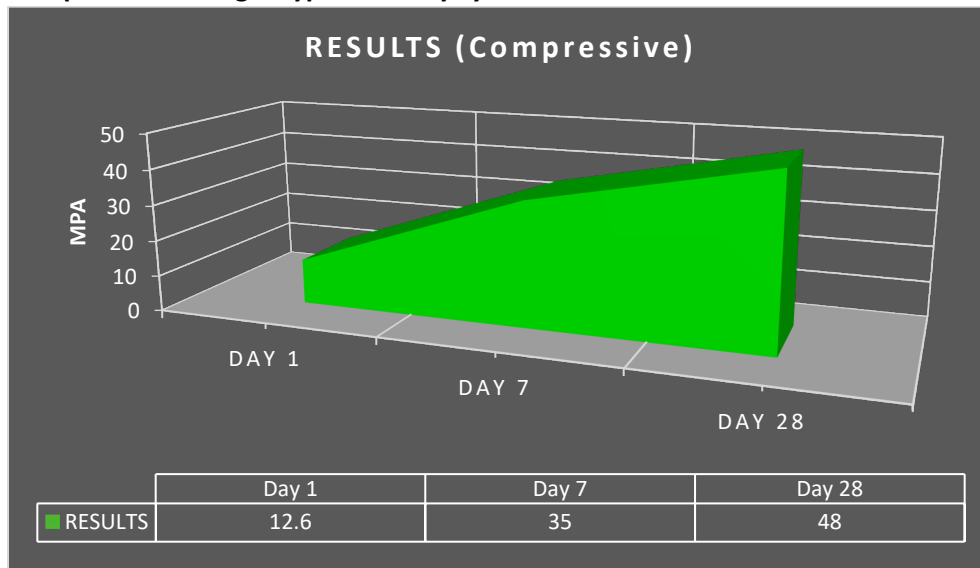
Final setting time is the time when the paste completely loses its plasticity.

It is the time taken for the product 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

FibreTec can reach moderate early strengths, reaching in excess of 45 Mpa in 28 days. This material has a flexural strength greater than 6.3 MPa tested at 28 days and a typical shrinkage average of 600 micro strain over 56 days.

Compressive Strength typical 28-day cycle



*Variations are to be expected because of changing site conditions, weather, quality of preparation, level of expertise during application & curing. Results from independent laboratory 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 FibreTec with approximately 0.14 litres of water per 1kg of powder.

FibreTec can be sprayed to depths in excess of 220mm in one pass depending on environmental conditions and operator competence.

Cleaning

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

Storage & Shelf Life

If FibreTec 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 elevated temperatures or humidity.

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

Packaging

FibreTec 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 managed 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 by third parties. Ventsec retains the right to update this TDS without prior notice.

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