

MINING / CONSTRUCTION

Tekcrete™ Fast M

LOW DUSTING, ULTRA-RAPID HARDENING, HIGH-STRENGTH SHOTCRETE

DESCRIPTION

Tekcrete™ Fast M was developed in response to customer demand for a shotcrete with effectively immediate strength on application. The product can be used with or without steel or polymer mesh, although the mesh will provide additional tensile and flexural strength. Binding broken strata together for better structural integrity, Tekcrete™ Fast M can be used anywhere in a mine where conventional shotcrete is used and as with any coating or sealant.

It performs best when applied as soon as possible after the strata is exposed. Including rebound, Tekcrete™ Fast M has a surface coverage of approximately 0.72 m² per 25 kg bag at a thickness of 12 mm.



APPLICATION AND USE

Tekcrete™ Fast M is a specially formulated, extremely rapid hardening, high performance shotcrete. Fibre reinforced, this product offers strengths over 55 MPa and can be used in conventional, dry-process shotcrete equipment. It is ideal where immediate structural strength is required.

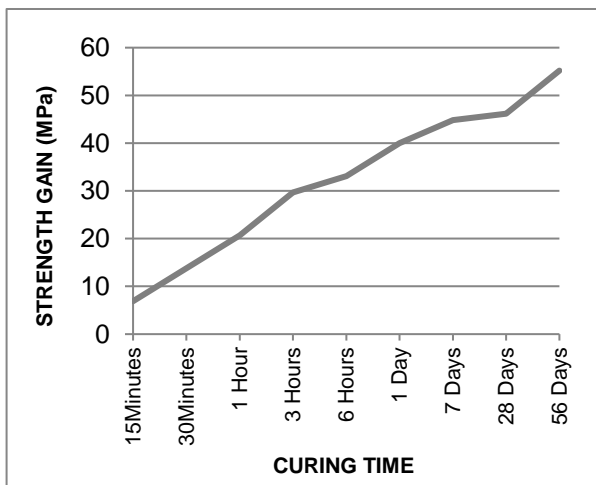
ADVANTAGES

- Ultra-rapid rate of strength gain – Structural strength achieved in a few minutes (Table 1).
- Low dusting and rebound - Allows work to continue in nearby areas during application.
- Safe – The high modulus polymer fibres are safer to handle than steel or fibreglass fibres.
- High build - The rapid rate of strength gain allows high build.
- Fibre reinforced – The large proportion of high modulus fibres permits strain hardening and excellent post peak failure characteristics.

TECHNICAL DATA

COMPRESSIVE STRENGTH DEVELOPMENT

Time	PSI	MPa
15 Minutes	1 000	6.89
30 Minutes	2 000	13.79
1 Hour	3 000	20.68
3 Hours	4 300	29.65
6 Hours	4 800	33.09
1 Day	5 800	39.99
7 Days	6 500	44.82
28 Days	6 700	46.19



FLEXURAL STRENGTH

Time	PSI	MPa
3 Hours	800	5.52
1 Day	950	6.55
7 Days	1 150	7.93

SPLITTING TENSILE STRENGTH

Time	PSI	MPa
6 Hours	900	6.21
1 Day	1 000	6.89
7 Days	1 200	8.24
28 Days	1 250	8.62

APPLICATION METHOD

Spraying of mortars is a skilled process and requires trained and experienced operators to achieve good results. The operator controlling the nozzle will determine the quality of the finish as he proceeds with the application. It is therefore essential that only experienced applicators are employed, who are familiar with the process and are fully aware of the requirements and details of the techniques.

1. Remove or protect any objects that are not to be covered with Tekcrete™ Fast M.
2. Remove as much dust and loose material as is possible. Clean the surface to be covered with high-pressure water. Moisture will allow a better bond between the product and the strata.
3. Following the instructions for the particular shotcrete equipment you are using, apply Tekcrete™ Fast M to the strata.
 - a) The best time to spray is right after excavation, when fresh, solid rock is first exposed.
 - b) Temperature should be 10° C, or higher.
 - c) The practical thickness achievable will depend on the orientation of the substrate, the material used and the geometry of the repair area.
4. Purge all Tekcrete™ Fast M from the machine and lines when cleaning up. Follow the machine manufacturer's directions for clean-up.

Consult your local representative for additional application and contracting information.

All tools and equipment must be washed with water immediately after use.

SAFETY INSTRUCTIONS AND LIMITATIONS

Tekcrete™ Fast M is alkaline. Waterproof gloves, dust-masks and goggles should be worn. Splashes must be removed from the skin and eyes by washing with clean water. In case of splashes in the eyes, medical attention should be sought immediately. Refer to Material Safety Data Sheet.

PACKAGING AND TRANSPORTATION

Available in 25 kg, bags, 40 bags to a stretch-wrapped pallet, or in 1 tonne bulk bags.

STORAGE AND SHELF LIFE

Tekcrete™ Fast M has a shelf life of 6 months when stored in cool, dry conditions; avoid storage in direct sunlight to prevent degradation of packaging.

DISPOSAL

Follow local regulations.

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