

MINING / CONSTRUCTION

TEKCRETE FAST

ULTRA RAPID HARDENING HIGH STRENGTH DRY PROCESS SHOTCRETE (GUNITE) MATERIAL

DESCRIPTION

TekCrete Fast was developed in response to customer demand for a shotcrete (gunitite) with effectively immediate strength upon application. Tekcrete Fast may be used with or without steel or polymer mesh, although the use of mesh will provide additional tensile and flexural strength. Binding broken base material together for greater structural integrity, TekCrete Fast can be used anywhere conventional shotcrete (gunitite) is used and as with any coating or sealant, TekCrete Fast performs best when applied as soon as base material is exposed. Including rebound, TekCrete Fast surface coverage is approximately 8.2ft² per 60 lb bag at an application thickness of 1/2 inch (12.7 mm).



USES

TekCrete Fast is a specially designed, ultra-rapid hardening, high performance dry process shotcrete (gunitite). Fiber-reinforced, this product offers superlative adhesion characteristics and strength over 10,000 psi for use in conventional, dry-process shotcrete (gunitite) equipment. TekCrete Fast is ideal where immediate structural strength is required.

ADVANTAGES

- Ultra-rapid strength gain - structural strength achieved in a few minutes
- Safe – high modulus polymer fibers are safer to handle than steel or glass fibers with minimal dust
- Chloride Permeability – very low
- High build – low rebound

APPLICATION METHOD

Preparation

If spraying on rock, clean surfaces of loose or friable materials, mud or foreign matter that might weaken shotcrete bonding with high-pressure water, as moisture will allow for a better bond between the product and the base material. Spraying of shotcrete (gunitite) mortar is a skilled process and requires trained and experienced operators to achieve best 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 who are familiar with the process and are fully aware of the requirements and details of the application techniques be employed. Remove or protect objects that are not to be covered with

TekCrete Fast. Due to the rapid setting nature of TekCrete Fast, the use of a pre-dampener is not recommended.

Placement

The placement of TekCrete Fast depends primarily on the ability of the dry process shotcrete nozzleman who should be certified in the placement of shotcrete. Ensure air and substrate temperatures are greater than 40° F (4.5°C) during and for 48 hours after application of shotcrete. Follow the instructions for the specific shotcrete equipment you are using.

The best time to spray is directly after surface preparation when the base material is first exposed. After coating the area with TekCrete Fast and allowing the product to set firmly, keep the work area moist using a fine mist water spray for one day in order to generate best results.

Practical achievable thickness will depend on the orientation of the substrate, the material used and the geometry of the repair area.

Curing

Curing is essential to optimize the physical properties of TekCrete Fast and minimize plastic shrinkage. TekCrete Fast should be cured immediately after the material has reached initial set in accordance with ACI 308R-16 (Guide to External Curing of Concrete). Curing is particularly important where rapid moisture loss can take place such as low humidity, high winds and high temperatures.

Purge all TekCrete Fast material from the pump and lines upon project completion. Follow the pump manufacturer’s instructions for additional specific clean-up procedures.

TECHNICAL DATA

The data below is laboratory data only. It may vary in practice due to thermal exchange between cement and substrate, temperature and other factors.

Parameter	Time / Value
Compressive Strength ASTM C39	15 min / 2000 psi (13.7 MPa)
	60 min / 4000 psi (27.5 MPa)
	4 hrs / 6250 psi (43.0 MPa)
	24 hrs / 6500 psi (44.8 MPa)
	7 days / 9000 psi (62.0 MPa)
	28 days / 10,000 psi (69.0 MPa)
Dry Shrinkage ASTM C341	56 days / -0.020 (%)
Wet Expansion ASTM C341	56 days / 0.002 (%)
Modulus of Elasticity ASTM C469	28 days / 5967 (ksi)
Rapid Chloride Permeability ASTM C1202	28 days classified “very low”
Tensile Bond Strength ASTM C1583	28 days 315 psi (2.17 MPa)

SAFETY INSTRUCTIONS AND LIMITATIONS

Good housekeeping is needed during storage, transfer, handling and use of this material to avoid excessive dust accumulation. Never add material to this product unless instructed by Minova USA, Inc.

PACKAGING AND TRANSPORTATION

TekCrete Fast is available in 60 lb bags, 48 bags per pallet and 3,000 and 1,500 lb supersacks.

STORAGE AND SHELF LIFE

Twelve months, in cool dry conditions.

DISPOSAL

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

APPROVALS AND CERTIFICATES



an ISO 9001:2015
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