

MINING / CONSTRUCTION

TEKCRETE PRO 1500

RAPID HARDENING DRY PROCESS SHOTCRETE (GUNITE) MATERIAL

DESCRIPTION

TekCrete Pro 1500 is supplied as a ready-to-use dry powder, formulated for dry mix shotcrete requiring only the addition of water. TekCrete Pro 1500 is a formulated blend of special cements, additives, and carefully graded aggregates which when mixed with water results in a high build, dense, low absorption shotcrete mortar. The controlled set feature allows 10 – 15 minutes working time for trowelling if needed. Very high early and ultimate compressive strengths are achievable. Each 60 lb bag of TekCrete Pro 1500 material creates coverage of approximately 0.45 cubic feet.

USES

TekCrete Pro 1500 is ideal for large vertical and overhead structural repairs where a rapid hardening product is needed. Bridge and parking structures, supporting columns and beams, seawalls tunnel linings, slope stabilization, dams, mine entry support, and mine sealing are just a few of the applications for TekCrete Pro 1500.

ADVANTAGES

- Very high early strength faster turnaround
- High build rate allows a large thickness to be sprayed in a single pass
- Workable The controlled set feature allows 10 – 15 minutes of open time to allow trowel finish.



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 (gunite) 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.

TECHNICAL DATA SHEET



Remove or protect objects that are not to be covered with TekCrete Pro 1500. Due to the rapid setting nature of TekCrete Pro 1500, the use of a predampener is not recommended.

PLACEMENT

The placement of TekCrete Pro 1500 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.

The best time to spray is directly after surface preparation when the base material is first exposed. After coating the area with TekCrete Pro 1500 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.

CURING

Curing is essential to optimize the physical properties of TekCrete Pro 1500 and minimize plastic shrinkage. TekCrete Pro 1500 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 Pro 1500 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	1 hr / 2500 psi (17.2 MPa)
	4 hrs / 4000 psi (27.5 MPa)
	24 hrs / 4500 psi (31.0 MPa)
	7 days / 5500 psi (38.0 MPa)
	28 days / 8500 psi (58.6 MPa)
Dry Shrinkage	56 days / -0.059 (%)
ASTM C341	
Wet Expansion	56 days / 0.006 (%)
ASTM C341	
Modulus of Elasticity ASTM C469	28 days / 5100 ksi
Rapid Chloride Permeability	28 days classified "low"
ASTM C1202	
Tensile Bond Strength ASTM C1583	28 days 260 psi (1.8 MPa)
Freeze/Thaw Resistance RDM %	98 @ 216 °C
ASTM C666	



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 Pro 1500 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 accordance with all applicable federal, state/provincial and local laws and(RCRA) 40 CFR 261. Dispose of material in 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 Quality Management System Certified Company.

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ADDITIONAL DOCUMENTATION

Started more than 135 years ago, Minova is a global manufacturer and supplier of chemical and mechanical earth control products and support equipment. With manufacturing plants on five continents and operations in more than 25 countries, Minova is an industry-leading provider of ground support solutions for the underground mining, construction and energy industries.

If further information is required consult Minova Americas website: www.minovaglobal.com.

- TekCrete Pro 1500 Safety Data Sheet (SDS)
- Minova TekCrete Pro 1500 Product Specification

MANUFACTURER

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