MINOVA

MINING / CONSTRUCTION

TEKCRETE PRO

MICROSILICA ENHANCED DRY PROCESS SHOTCRETE (GUNITE) MATERIAL

DESCRIPTION

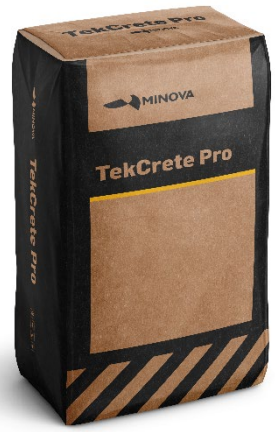
TekCrete Pro is supplied as a ready-to-use dry powder, formulated for dry mix shotcrete requiring only the addition of water. TekCrete Pro is a specially formulated blend of micro silica cement, PVA high modulus fibers and carefully graded aggregates which when mixed with water results in a high build, dense, low absorption shotcrete. The required low water-to-cement ratio ensures high early and ultimate strengths. TekCrete Pro shrinkage compensation minimizes stress at the bond line. Each 60 lb bag of TekCrete Pro creates approximately 0.45 cubic feet of material.

USES

TekCrete Pro is ideal for large vertical and overhead structural repairs where a reliable dry process shotcrete or gunite is required. Bridge and parking structures, supporting columns and beams, seawalls, tunnel linings, dams, mine entry support, and mine sealing are just a few of the applications for TekCrete Pro.

ADVANTAGES

- Fiber reinforced – High modulus PVA fibers to help reduce cracking potential
- Reliability – Factory quality-controlled materials ensuring consistent proportioning, mixing and packaging
- Relatively fine aggregate – Carefully graded to allow easier finishing and thinner layers



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.

Remove or protect objects that are not to be covered with TekCrete Pro.

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Placement

The placement of TekCrete Pro 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 Pro 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 and minimize plastic shrinkage. TekCrete Pro 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 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	24 hrs / 6000 psi (41.3 MPa) 7 days / 7000 psi (48.2 MPa) 28 days / 7500 psi (51.7 MPa)
Dry Shrinkage ASTM C341	56 days / -0.030 (%)
Wet Expansion ASTM C341	56 days / 0.002 (%)
Modulus of Elasticity ASTM C469	28 days / 5517 (ksi)
Freeze/Thaw Resistance ASTM C666	216 C / RDM @ 98 (%)
Rapid Chloride Permeability ASTM C1202	28 days classified "very low"
Tensile Bond Strength ASTM C1583	28 days 420 psi (2.8 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 Pro 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
Quality Management System Certified Company.

DISCLAIMER

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