



CHEM-CRETE[®] TUNNEL LINING SYSTEM

One Component Cementitious Mortar for Tunnel Lining

PRODUCT DESCRIPTION

CHEM-CRETE TUNNEL SYSTEM is a one component, prepackaged and ready to use material. It is suitable for dry spray gunning combining cement and special aggregates with quick setting and waterproofing properties.

CHEM-CRETE TUNNEL SYSTEM is formulated with additives of high efficiency for dust-binding action and high early strength. It is ideal for large vertical and overhead structural concrete repair.

FIELDS OF APPLICATION

CHEM-CRETE TUNNEL SYSTEM is used to encapsulate concrete in overhead and vertical applications. CHEM-CRETE TUNNEL SYSTEM can be used above or below grade.

PRODUCT FEATURES

- Superior adhesion.
- High compressive strength.
- High Adhesion
- Very Low shrinkage.
- Vapor permeable.
- 100 % solid and fast cure.
- Ready to use and no field batching is required.
- Very low porosity.
- Excellent resistance to freeze-thaw cycling.
- Excellent resistance to chemical attack.
- High structural properties.
- Low rebound formulation.
- High abrasion resistance.

PACKAGING

Product	Packaging
CHEM-CRETE TUNNEL SYSTEM	55 Lb (25 KG) BAG

TECHNICAL DATA

PROPERTY	TEST METHOD	TEST CRITERIA	RESULTS
Compressive Strength	ASTM C-109	1 Day	2,200 psi (15.17 MPa)
		7 Days	4,500 psi (31.03 MPa)
		28 Days	7,700 psi (53.09 MPa)
Flexural Strength	ASTM C-78	7 Days	950 psi (6.55 MPa)
		28 Days	1,000 psi (6.90 MPa)
Tensile Strength	ASTM C-946	7 Days	530 psi (3.65 MPa)
		28 Days	760 psi (5.24 MPa)
Bond Strength	ASTM C-882	1 Day	910 psi (6.27 MPa)
		7 Days	1,980 psi (13.65 MPa)
		28 Days	2,300 psi (15.86 MPa)
Water Absorption	ASTM C-642	28 Days	1.0%
Abrasion Resistance	ASTM D-4060		0.3% Loss

APPLICATION DATA

Limitations: Do not apply CHEM-CRETE TUNNEL SYSTEM if ambient and surface temperature is less than 38°F (3°C). Do not commence fogging until initial set has been reached; typically, 1 – 2 hours depending on the ambient conditions. The product should be conditioned to between 40°F (4°C) and 95°F (35°C) before use.

Surface Preparation: All surfaces must be clean and free of dirt, dust, paint, sealers, coatings, loose material, adhesives, curing compounds, or any material that inhibit CHEM-CRETE TUNNEL SYSTEM from coming in contact with the concrete pores. Removal of any anti-adherents or loose materials must be accomplished mechanically. For proper adhesion, the concrete must have fractured aggregate profile. Dampen the surface thoroughly with clean water. Avoid standing water.

Application Equipment: CHEM-CRETE TUNNEL SYSTEM can be applied with dry shotcrete equipment. No water is to be added unless in the nozzle of the shotcrete application machine. Contact our company for more information on application equipment.

Water Consumption: 100 Lbs. of CHEM-CRETE TUNNEL SYSTEM will require 18 to 20 Lbs. Water.

Setting Time:

Initial set is 45 to 50 minutes

Final Setting: 50 to 55 minutes

Application Thickness: minimum recommended is ¼ inch.

Coverage: a 55 Lb (25 Kg) Bag of CHEM-CRETE TUNNEL SYSTEM will yield approximately ½ cubic foot (14.16 Liters).

Curing: the formulation of CHEM-CRETE TUNNEL SYSTEM minimizes the need for curing. However, application in direct sunlight or windy conditions may lead to rapid surface drying. The use of light water fogging for 48 hours or a water-based curing compound that complies with C-309 is recommended.

CLEANING

Clean all mixing and application equipments with water immediately after use. Remove all splatter of spills with water before material sets.

STORAGE

CHEM-CRETE TUNNEL SYSTEM should be stored in dry area away from direct sunlight. When properly stored, CHEM-CRETE TUNNEL SYSTEM has a shelf life of 24 months in its original unopened bag.

SAFETY PRECAUTIONS

CHEM-CRETE TUNNEL SYSTEM is a non-flammable and non-toxic in nature. Avoid contact with eyes and skin as it may cause irritation due to its alkaline nature. Splashes of CHEM-CRETE TUNNEL SYSTEM should be washed off immediately with clean water. Wear necessary safety goggles, gloves and dust mask. Keep container closed when not in use. Keep out of reach of children. This product is for industrial use only by qualified technician. Consult the material safety data sheet for further health and safety information.

TECHNICAL ASSISTANCE

Please contact International Chem-Crete Corporation for Technical Assistance.

WARRANTY

LIMITED WARRANTY: International Chem-Crete Inc. warrants that, at the time and place we make shipment, our materials will be of good quality and will conform to our

published specifications in force on the date of acceptance of the order.

DISCLAIMER: The information contained herein is included for illustrative purposes only and, to the best of our knowledge, is accurate and reliable. International Chem-Crete Inc. is not under any circumstances liable to connection with the use of information. As International Chem-Crete Inc. has no control over the use to which others may put its products, it is recommended that the products be tested to determine the suitability for specific applications and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner of the design, application and proper installation of each product. Specifier and user shall determine the suitability of the product for specific application and assume all responsibility in connection therewith. AM22319.

Manufactured By:



International Chem-Crete Inc., 800 Security Row, Richardson, TX 75081, U.S.A
Tel: (972) 671-6477, Fax: (972) 238-0307
contactus@chem-crete.com www.chem-crete.com