



Raven 705CA

DESCRIPTION

Raven® 705CA is an acid resistant reinforced calcium aluminate cementitious product for use on concrete and masonry structures as a repair mortar. Designed as a reinforced stand alone product or as an underlayment for Raven coatings, 705CA's properties allow it to be efficiently spray applied to rehabilitate substrates providing a suitable surface for the application of a polymer topcoat.

TYPICAL USES

Surfaces where rehabilitation of an existing structure requires enhancement of the structural integrity and where exposure to concentrated acids and caustics may be expected, including:

- Tunnels and pipelines
- Digesters
- Secondary containment
- Wastewater facilities
- Clarifiers
- Tanks
- Manholes
- Floors and walls

APPLICATION THICKNESS

Raven® 705CA is designed for applications from ½" to 1". Additional thickness may be applied in successive applications as necessary. A depth gauge may be used to verify applied thickness.

COVERAGE

Theoretical coverage 12.5 square feet per 65 lb. bag at ½" nominal thickness (yield of 0.57 ft³/bag). Actual surface coverage will depend upon substrate roughness and irregularities.

APPLICATION

Apply with trowel, cementitious spray system or other suitable method. Optimal mixing and application is achieved with the use of a Raven approved low velocity cementitious spray system (such as SPRAYMATE® 35C, 35D or MINIMATE® MACHINE).

COMPONENTS AND MIXING

Dry cement powder, 65 lbs. per bag, is to be mixed with 1.0 to 1.2 gallons of clean, potable water (or as recommended by Raven based upon application conditions). Follow mixing procedures noted on product bag.

CLEAN UP

To clean tools and equipment flush with water. To clean skin, wash immediately and thoroughly with soap and water. Refer to the Material Safety Data Sheet for additional information on health and safety.

CURE TIME

Caution should be taken to minimize exposure of applied product to sunlight and air movement. If time between applications of additional product is to be longer than 15 minutes, place cover over structure to restrict air movement. At no time should the finished product be exposed to sunlight or air movement for longer than 15 minutes. In extremely hot and arid climates surfaces shall be shaded while application is in process. In environments where humidity level is below 70% the finished product shall be kept damp for 72 hours.

The final application shall have a minimum of four hours cure time at 50°F prior to surface preparation for polymer topcoat.

APPLICATION TEMPERATURES

No application shall be made when ambient temperature is 40°F or less or when substrate temperatures are (or may become within 24 hours of application) less than 35°F. Precautions shall be taken to keep the mix temperature at time of application below 90°F. Water temperature shall not exceed 80°F (chill with ice if necessary).

SURFACE PREPARATION

Prior to coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale or deposits. In general, performance is proportional to the degree of surface preparation.

CONCRETE AND MASONRY surfaces must be sound and contaminant-free with a surface profile equivalent to a CSP2 to CSP5 in accordance with ICRI Technical Guideline No. 03732. This can generally be achieved by abrasive blasting, shot blasting, high pressure water cleaning, water jetting, or a combination of methods.

Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer, chisel and/or scraper. All voids shall be filled and active leaks stopped per Raven specifications. Prior to application surfaces shall be damp but free of flowing or excess water; a Saturated, Surface Dry (SSD) condition.

AVAILABLE PACKAGES

Available in 65 lb. bags. Raven® 705CA is available through Raven Certified Applicators.

Raven 705CA

SHELF LIFE AND STORAGE

Product shelf life is 1 year from purchase date in sealed bags, stored in a sheltered area between 40°F and 110°F. Materials are to be kept dry and protected from weather.

SAFETY

Consult the Material Safety Data Sheet for this product concerning health and safety information before using.

Strictly follow all notices on the Material Safety Data Sheet and container label. If you do not fully understand the notices and procedures provided on the MSDS or if you cannot strictly comply with them, do not use this product. Actual safety measures are dependent on application methods and work environment. Contact Raven to obtain a copy of the Material Safety Data Sheet at 800-324-2810.

TYPICAL PROPERTIES

DESCRIPTION	METHOD	RESULT
Tensile Strength	ASTM C 496	> 685 psi
Compressive Strength	ASTM C 109	> 9200 psi @ 28 days
Flexural Strength	ASTM C 293	> 1650 psi
Shrinkage @ 90% R. H.	ASTM C 596	0 %
Bond	ASTM C 882	> 4000 psi
Freeze/Thaw	ASTM C 666	100 Cycles, no visible damage
Density of wet mix		129 – 139 lbs./ft ³ .
Applied Density		135 pfc ± 5

Warranty and Disclaimer: Raven warrants its products to be free of manufacturing defects and that they will meet current published physical properties when applied in accordance with Raven directions and tested in accordance with ASTM and Raven standards. If, within one year from purchase, any product does not meet the physical properties or is defective in manufacture, Raven, at its sole option, will either replace the defective product or refund the purchase price. This warranty is void if the product is used contrary to Raven written directions.

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