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# Raven® 705CA

## Technical Data Sheet

### Selection & Specification Data

#### Description

**Raven® 705CA** is a reinforced calcium aluminate cementitious product for use on concrete and masonry structures as a repair mortar. Designed as a reinforced standalone 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.

#### Physical Properties (Typical)

Test	Method	Result
Compressive Strength	ASTM C109, 28 days	> 9,200 psi
Flexural Strength	ASTM C293	> 1,650 psi
Tensile Strength	ASTM C496	685 psi
Shrinkage @ 90% R.H.	ASTM C596	0 %
Freeze/Thaw	ASTM C666 100 cycles	No visible damage
Bond	ASTM C882	> 4,000 psi
Applied Density		132 ± 5 lbs./ft <sup>3</sup>

#### Coverage & Application Thickness

Theoretical coverage is 13.7 square feet per 65 pound bag at ½" nominal thickness (yielding 0.57 cubic feet per bag). Actual surface coverage will depend upon substrate roughness and irregularities. **Raven 705CA** is designed for applications from ½" to 1". Additional thickness may be applied in successive applications as necessary.

#### Surface Preparation

Prior to application surfaces shall be damp but free of flowing or excess water; a Saturated, Surface Dry (SSD) condition. Follow standard practices: the substrate must be prepared in a manner that provides a uniform, clean, sound, and neutralized surface with all active leaks stopped. The substrate must be free of all contaminants, such as oil, grease, rust, scale, or deposits. Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer, chisel, and/or scraper.

#### Concrete and Masonry

Surfaces must be sound and contaminant-free with a surface profile equivalent to a minimum of CSP 5 in accordance with ICRI Technical Guideline No. 310.2R-2013. This can generally be achieved by abrasive blasting, shot blasting, high pressure water cleaning, water jetting, or a combination of methods.

#### Components & Mixing

Dry cement powder, 65 pounds per bag, is to be mixed with 1.0 to 1.3 gallons of clean, potable water (or as recommended by Raven based upon application conditions). Follow mixing procedures noted on the product bag.

#### 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 (Graco M680 Mortar Pump).



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Application Temperatures & Cure Time	
<p><b>Application Temperatures</b></p> <p>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 ambient, substrate, and mix temperature below 90°F at time of application. Water temperature shall not exceed 80°F. Chill with ice if necessary.</p>	<p><b>Cure Time</b></p> <p>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. At 72° F, working time is 45 minutes, initial set time is 20 hours and cure 24 hours before surface preparation for polymer topcoat.</p>
Cleanup & Safety	
<p><b>Cleanup</b></p> <p>To clean tools and equipment flush with water. To clean skin, wash immediately and thoroughly with soap and water. Refer to the SDS for additional information on health and safety.</p>	<p><b>Safety</b></p> <p>SDS's are available on the website, (<a href="http://www.ravenlining.com">www.ravenlining.com</a>) or upon request. Consult the Safety Data Sheet for this product concerning health and safety information before using. Strictly follow all notices on the Safety Data Sheet and container label. If you do not fully understand the notices and procedures provided on the SDS or if you cannot strictly comply with them, do not use this product. Actual safety measures are dependent on application methods and work environment. Keep uncured product away from children at all times.</p>
Packaging, Shelf Life & Storage	
<p><b>Packaging</b></p> <p>Available in 65 pound bags with 40 bags per pallet. Raven 705CA is available through Raven Certified Applicators.</p>	<p><b>Shelf Life</b></p> <p>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.</p>



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### Warranty

**Limited Warranty.** Company warrants its goods to be free of manufacturing defects. Goods manufactured by Company will comply with all applicable federal, state and local laws and regulations. Company makes no warranty as to any parts or equipment manufactured by others. Customer shall look solely and only to the manufacturer of such parts or equipment with respect to any warranty claims. Company hereby assigns to Customer the original manufacturer's warranties to all such equipment and parts, to the full extent permitted. THE AFORESAID IS THE EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

**Limitation of Liability.** COMPANY'S LIABILITY FOR DEFECTIVE OR NON-CONFORMING GOODS SHALL BE LIMITED TO, AND SHALL IN NO EVENT EXCEED, THE AMOUNT PAID BY CUSTOMER FOR SUCH DEFECTIVE OR NON-CONFORMING GOODS. UNDER NO CIRCUMSTANCES SHALL COMPANY BE LIABLE FOR ANY SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOST PROFITS. In no event may any claim by Customer arising from or relating to any sale of any goods or services referenced herein be brought more than one year after the date of delivery of such Goods.