

CMS 10K

CEMENTITIOUS MORTAR



PRODUCT DESCRIPTION

CMS 10K provides a system for the rehabilitation of concrete or masonry structures to stop infiltration, exfiltration, and restore structural integrity in structures within environments possessing a ≥ 3 pH. CMS 10K is a Type I/II portland cement-based product blended with pozzolans, masonry sand, alkaline-resistant fiberglass reinforcement, and performance enhancing admixtures. It is used to form a structural monolithic liner covering all interior substrate surfaces.

PERFORMANCE SPECIFICATIONS

Compressive strength: (ASTM C109)	>9,000 psi	28 Days
Tensile strength: (ASTM C496)	>800 psi	28 Days
Flexural strength: (ASTM C293)	>1,200 psi	28 Days
Bond strength: (ASTM C882)	>2,000 psi	28 Days
Freeze/Thaw resistance: (ASTM C666)	Pass, No Damage	28 Days
Drying shrinkage: (ASTM C596)	0%	28 Days @ 90% RH
Wet unit weight: (ASTM C138)	134 \pm 5 lbs/ft ³	
Packaging	50 lbs bag	54 bags/pallet
Yield per bag	0.58 ft ³ / 14 ft ²	

TYPICAL STRUCTURES

CMS 10K provides vertical, horizontal, and overhead repairs to a variety of concrete and masonry structures including:

Manholes	Tunnels & Pipelines
Tanks & Containment	Wastewater Facilities

EQUIPMENT

Approved application equipment includes the SprayMate® 35C, SprayMate® 35D, and MiniMate II. If using other equipment, please contact Rainstopper (see footer).

SURFACE PREPARATION

Remove all foreign material and laitance from the substrate using a high-pressure water spray (minimum 3000 psi). Remove loose and protruding brick, mortar, and concrete using a mason's hammer, chisel and/or scraper. Fill any large voids with a rapid-setting patching product per manufacturer's recommendations. Stop active leaks using an instant-setting, specially formulated product per manufacturer's recommendations. Some leaks may require weep holes to localize the infiltration during the application. After application, the weep holes shall be plugged with the instant-setting product prior to final pass. When severe infiltration exists, pressure grouting may be required. Follow manufacturer's recommendations when pressure grouting. Make any bench, invert, floor, or service line repairs at this time using a rapid-setting patching product per manufacturer's recommendations.

MIXING

Use 1.2 to 1.5 gallons of water per bag of product. Add the required amount of water to the mixer first, followed by the product. Mix until consistency allows for the application of up to one-inch thickness without material sagging on a vertical surface. Use the minimum amount of water to achieve desired consistency. Follow all other manufacturer's recommendations. Discharge mixed material into hopper and prepare another batch in such a manner as to allow continuous application without interruption until complete.

APPLICATION

Confirm substrate is clean and free of all foreign material and is damp without noticeable free water droplets or running water prior to application. Apply material up to one (1) inch thick in one or more passes starting from the bottom; however, minimum total thickness shall not be less than ½ inch. Firmly trowel the surface to a smooth finish being careful not to over trowel. Apply a wet brush finish to the troweled surface. Follow manufacturer's recommendations when more than 24 hours have elapsed between applications. After vertical and overhead application, apply material to bench or floor so that a gradual slope is produced from the walls to the invert or center of the floor. Provide a ½ inch minimum thickness at the invert or center of the floor. Round the wall/bench/floor intersection to a uniform radius the full length of the intersection. Trowel and brush finish as detailed above.

CURING

Take care to minimize exposure of applied material to sunlight and air movement. Cover the structure if application of additional passes is to be longer than 15 minutes. Do not expose to sunlight or air movement for longer than 15 minutes before covering or closing access. Shade the structure in hot and arid climates during application. Keep the applied material damp for the first 72 hours if the humidity level is below 70%. An ASTM C309 curing compound may be used in lieu of keeping material damp. Hold times for the final application are as follows: storm run-off and surcharge – eight (8) hours; force main impact – twelve (12) hours.

WEATHER

Do not apply if ambient temperature is below 40°F. Do not apply to frozen surfaces or if substrate is expected to freeze within 24 hours after application. Keep the material temperature below 90°F at time of application. Do not allow water temperature to exceed 80°F. Chill with ice if necessary.

ACCEPTANCE

Cast four 2-inch cube specimens each day or for every pallet of material used, whichever occurs first. Properly package, label, and return specimen to the manufacturer for testing in accordance with the owner's or manufacturer's directions for compressive strength per ASTM C109.