VERTICAL/OVERHEAD REPAIR

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EUCOREPAIR V100

LOW SHRINKAGE, FIBER REINFORCED, NSF/ANSI STANDARD 61 CERTIFIED VERTICAL & OVERHEAD REPAIR MORTAR

EUCLID CHEMICAL

PACKAGING

46 lb (21 kg) bag
Code: 161V 46
46 lb (21 kg) pail
Code: 161V 05 (MTO)
10 lb (4.5 kg) pail
Code: 161V 10

APPROXIMATE YIELD

46 lb (21 kg) unit: 0.45 ft³ (0.013 m³) per unit when mixed with 1 gal (3.8 L) of potable water.

MINIMUM/MAXIMUM APPLICATION THICKNESS

Vertical: 1/8 to 4 inches (3.2 mm to 10 cm) per lift
Overhead: 1/8 to 2 inches (3.2 mm to 5 cm) per lift

CLEAN UP

Clean tools and equipment with water before the material hardens.

SHELF LIFE

1 year in original, unopened package

SPECIFICATIONS AND COMPLIANCES

- NSF/ANSI 61 certified for use with potable water
- ASTM C928 Standard Specification for Rapid Hardening Cementitious Materials for Concrete Repairs

DESCRIPTION

EUCOREPAIR V100 is a single-component, quick-setting, low shrinkage repair mortar formulated with unique polymers and fiber reinforcement for vertical and overhead repairs requiring high performance.

PRODUCT CHARACTERISTICS

FEATURES/BENEFITS

- Single-component for easy mixing and handling
- Excellent freeze-thaw resistance for difficult climates
- Polymer modified with fiber reinforcement
- NSF/ANSI Standard 61 certified
- Contains an integral corrosion inhibitor
- Low permeability helps protect rebar from corrosion
- High bond strength provides excellent adhesion
- Apply coatings after 6 hours at 70 °F (21 °C)

PRIMARY APPLICATIONS

- Vertical and overhead repairs
- Parking structures & bridges
- Water and wastewater treatment facilities
- Marine structures, tunnels, and dams
- Above and below grade applications

APPEARANCE

EUCOREPAIR V100 is a free-flowing powder designed to be mixed with water. After mixing and placing, the color may appear darker than the surrounding concrete. While this color will lighten as EUCOREPAIR V100 cures and dries out, the repair may always appear darker than the surrounding concrete.

TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Test Method	Test Property	Values
ASTM C109M 2″ (50 mm) cubes	Compressive Strength	3 hours. . . . . 2,000 psi (13.8 MPa) 1 day. . . . . 3,000 psi (20.7 MPa) 7 days . . . . . 4,500 psi (31.0 MPa) 28 days . . . . . 6,000 psi (41.4 MPa)
ASTM C496	Split Tensile Strength	28 days . . . . . > 400 psi (2.8 MPa)
ASTM C348	Flexural Strength	7 days . . . . . > 500 psi (3.4 MPa) 28 days . . . . . > 600 psi (4.1 MPa)
ASTM C882	Bond Strength	7 days . . . . > 1,400 psi (9.7 MPa) 28 days . . . . > 1,800 psi (12.4 MPa)
ASTM C157M*	Length Change	28 days . . . . . .- 0.020%
	Unit Weight	~120 lb/ft³ (1922 kg/m³)
	Approximate Set Times	Initial Set . . . . . 20 minutes Final Set . . . . . 35 minutes

*3″ x 3″ x 11.25″ specimens

DIRECTIONS FOR USE

Surface Preparation: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 5 - 7 in accordance with ICRI Guideline 310.2. Properly clean profiled area.

Priming & Bonding (Saw Cut & Chipped Out Repairs): Thoroughly clean any exposed reinforcing steel, and apply DURALPREP A.C. to the concrete and the reinforcing steel within the repair area. Refer to the DURALPREP A.C. technical data sheet for full instructions. Alternatively, application of EUCOWELD 2.0 to a dry substrate or a scrub coat of EUCOREPAIR V100 to the saturated surface dry (SSD) concrete surface may be used for bonding. The repair material must be placed on the scrub coat before the scrub coat dries out.

Priming & Bonding (Vertical & Overhead Skim Coats/Toppings): Apply EUCOWELD 2.0 to a dry substrate or a scrub coat of EUCOREPAIR V100 to the saturated surface dry (SSD) concrete surface. The repair material must be placed on the scrub coat before the scrub coat dries out.

Mixing: One 46 lb (21 kg) unit requires 0.9 to 1.0 gal (3.40 to 3.79 L) of potable water. All materials should be in the proper temperature range of 65 to 85 °F (18 to 29 °C). Single 46 lb (21 kg) units may be mixed with a drill and "jiffy" mixer. A paddle type mortar mixer may be used for large jobs. Add the appropriate amount of potable water to a clean mixing vessel, then gradually add the dry product. Do not exceed maximum water or add any additional additives. Mix for 3 to 5 minutes. Do not retemper. Do not mix more material than can be placed within 15 minutes.

Placement: Ambient and surface temperatures should be at least 45 °F (7 °C). Working time at 72 °F (22 °C) is approximately 10 to 15 minutes. After mixing, place the mortar into the prepared area to be repaired. Work the material firmly into the bottom and sides of the repair area to ensure good adhesion. EUCOREPAIR V100 should be placed in 1/8" to 4" (3 to 100 mm) lifts. If placing overhead, maximum depth per lift is 2" (5 cm). If multiple lifts are to be applied, score the previous lift after placing to provide a suitable surface for mechanically bonding subsequent lifts.

Finishing: Finish the repair material to the desired texture. Do not add water to the surface during the finishing operation. When placing under hot and windy conditions, the use of EUCOBAR evaporation retarder is recommended to prevent the loss of surface moisture.

Curing and Sealing: Curing is required. Proper curing procedures are important to ensure the durability and quality of the repair. For best results cure with wet burlap, plastic, or a water-based curing compound such as DIAMOND CLEAR VOX or SUPER DIAMOND CLEAR VOX. Do not use a solvent based curing compound on this product. If a curing compound is not desired, wet cure for a minimum of three days. When curing EUCOREPAIR V100 in potable water vessels, it is recommended to wet cure for 3 days, followed by 4 days of air cure prior to filling the vessel.

PRECAUTIONS/LIMITATIONS

- Store in a dry place.
- For optimum results, condition material to 65 to 85 °F (18 to 29 °C) at least 24 hours prior to use.
- Minimum application temperature is 45 °F (7 °C) and rising at time of application.
- Do not allow repairs to freeze until the material has reached a minimum of 1,000 psi (7 MPa) compressive strength.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Do not use as a horizontal topping.
- Do not use a solvent based curing compound on this product.
- In all cases, consult the Safety Data Sheet before use.

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