



EUCLID CHEMICAL

# VERTICOAT

## TWO COMPONENT, TROWEL GRADE VERTICAL & OVERHEAD CONCRETE REPAIR MORTAR

### DESCRIPTION

VERTICOAT is a polymer modified cementitious mortar for vertical and overhead concrete and masonry repairs. It sets rapidly to allow quick, easy repairs of concrete surfaces both interior and exterior. VERTICOAT is a two component mortar designed for trowel applied repairs.

### PRIMARY APPLICATIONS

- Vertical and overhead repair of scaled and spalled concrete
- Repair of honeycombed surfaces
- Parking structures & bridges
- Retaining walls
- Ceilings and sloped surfaces

### FEATURES/BENEFITS

- Fast setting for rapid repairs up to 4" (10 cm)
- High compressive strengths
- Excellent resistance to freeze-thaw cycling
- Suitable for both interior and exterior applications
- Excellent bond to sound concrete
- Compatible with galvanic anodes

### TECHNICAL INFORMATION

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

#### Compressive Strength ASTM C109, 2" (50 mm) cubes

Age	Strength
1 day.....	4,000 psi (28 MPa)
3 days.....	5,000 psi (38 MPa)
7 days.....	6,000 psi (41 MPa)
28 days .....	6,500 psi (45 MPa)

#### Split Tensile Strength ASTM C496 @ 72°F (22°C)

7 days.....	700 psi (4.8 MPa)
28 days.....	800 psi (5.5 MPa)

Volumetric Resistivity.....6,730 ohm-cm

#### Flexural Strength ASTM C348

7 days.....	1,200 psi (8.3 MPa)
28 days.....	1,300 psi (9.0 MPa)

#### Set Time 70°F (21°C), ASTM C191

Initial Set.....	approx. 25 min.
Final Set .....	approx. 40 min.

Working Time .....approx. 20 min.

Freeze/Thaw Resistance ASTM C666 Procedure A  
300 cycles Relative Durability Modulus ..... >80%

**Appearance:** VERTICOAT is a free-flowing powder designed to be mixed with a white latex liquid (VERTICOAT LIQUID). After mixing and placing, the color may initially appear darker than the surrounding concrete. While this color will lighten up substantially as the VERTICOAT cures and dries out, the repair may always appear somewhat darker than the surrounding concrete.

### PACKAGING/YIELD

VERTICOAT is packaged in a pail containing a 54 lb (24 kg) pail of dry powder and 1 gal (3.8 L) of VERTICOAT LIQUID. Additionally, the powder is available in a 54 lb (24 kg) bag and mixed with 1 gal (3.8 L) of the liquid, that is sold separately. **Yield:** 0.48 ft<sup>3</sup> (0.014 m<sup>3</sup>) per kit.

### SHELF LIFE

VERTICOAT (Powder): 2 years in original, unopened package  
VERTICOAT LIQUID: 18 months in original, unopened package

VERTICAL/OVERHEAD REPAIR

VERTICOAT

MASTER FORMAT #:  
03 01 30.71

## COVERAGE

One unit of VERTICOAT will cover approximately 23 ft<sup>2</sup> (2 m<sup>2</sup>) when placed at an average depth of 1/4" (6 mm).

## 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 of at least CSP 6 - 8 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 VERTICOAT 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 VERTICOAT 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:** Single units may be mixed with a drill and "jiffy" type mixer. Use a paddle type mortar mixer for large jobs. NOTE: VERTICOAT HAS A WORKING TIME OF 20 MINUTES. DO NOT MIX MORE MATERIAL THAN CAN BE USED IN THAT TIME FRAME. All materials should be in the proper temperature range of 60°F (16°C) to 90°F (32°C). Add the appropriate amount of VERTICOAT LIQUID for the batch size, and then add the dry product. Mix for 2 to 3 minutes. The mixed product should be quickly transported to the repair area and placed immediately.

**Placement:** Place the VERTICOAT while the scrub coat is still wet. Trowel VERTICOAT onto the prepared surface at a minimum of 1/8" (3 mm), up to a maximum of 4" (10 cm). Trowel flush with surface and allow to stiffen. Finish to match the surrounding concrete surfaces.

**Finishing:** Finish the repair material to the desired texture. Do not add additional water to the surface during the finishing operation. Use EUCOBAR evaporation retarder.

**Curing and Sealing:** Proper curing procedures are important to ensure the durability and quality of the repair. To prevent surface cracking, cure the repair mortar with a high solids curing compound, such as SUPER AQUA-CURE VOX or SUPER DIAMOND CLEAR VOX. (NOTE: A SOLVENT BASED CURING COMPOUND SHOULD NOT BE USED ON THIS PRODUCT.) Under hot, windy or direct sunlight situations, apply a second coat of curing compound after the first has dried. If a curing compound is not desired, wet cure for a minimum of three days.

## CLEAN-UP

Clean tools and equipment with water before the material hardens.

## PRECAUTIONS/LIMITATIONS

- Do not use at temperatures below 45°F (7°C).
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Store material in a dry place, above freezing.
- Cool temperatures slow setting while warm temperatures speed up set times.
- Keep repair from freezing until a minimum strength of 1000 psi (7 MPa) is reached.
- In all cases, consult the Safety Data Sheet before use.

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