



# THE EUCLID CHEMICAL COMPANY

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# VERTICOAT

## TROWEL GRADE VERTICAL / OVERHEAD CONCRETE REPAIR MORTAR

**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 inside and outside. VERTICOAT is a two component mortar designed for trowel applied repairs.

### PRIMARY APPLICATIONS

- Vertical and overhead patching of scaled and spalled concrete
- Resurfacing of damaged concrete
- Repair of honeycombed surfaces
- Parking structures & bridges
- Retaining walls
- Ceilings and sloped surfaces
- Large placements

### FEATURES/BENEFITS

- Fast setting for rapid repairs up to 4" (100 mm) in thickness
- Easy to use as a prepackaged kit
- Excellent resistance to freeze/thaw cycling and de-icing salts
- Suitable for both interior and exterior applications
- Excellent bond to sound concrete
- High compressive strengths and bond

### SPECIFICATIONS/COMPLIANCES

- VERTICOAT attains a bond strength in compliance with ASTM C 1059-91, Type II systems.

### 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).

**Note:** This product requires a curing compound. Consult the curing information.

### PACKAGING/YIELD

VERTICOAT is packaged in a pail containing 54 lb (24 kg) of dry powder and 1 gallon (3.8 liter) of VERTICOAT LIQUID or as a matched bag and jug unit.

**Yield:** 0.48 ft<sup>3</sup> (0.014 m<sup>3</sup>) per 62 lb (28 kg) unit.

### TECHNICAL INFORMATION

#### Typical Engineering Data

The following results were developed under laboratory conditions using 1 gallon of verticoat liquid / 54lb bag.

#### Compressive Strength

ASTM C-109, 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)

#### Bond Strength

ASTM C1042 @ 72°F (22°C)	Age	Strength
	1 day	1,120 psi (8 MPa)
	7 days	1,440 psi (9 MPa)
	28days	1,760 psi (12 MPa)

#### Flexural Strength

ASTMC-348	Age	Strength
	7 days	1,500 psi (10 MPa)

#### Set Time 70°F (21°C), ASTM C-191

Initial Set..... 25 min.

Final Set.....40 min.

#### Working Time: 10 minutes

#### Freeze/Thaw Resistance, ASTM C-666

Procedure A @ 500 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.

The final finish can be any texture consistent with that expected from concrete and should match the surrounding concrete.

## DIRECTIONS FOR USE

**Surface Preparation**-New concrete must be a minimum of 3 days old. The old concrete must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a scabber, bushhammer, shotblast or scarifier which will give a surface profile of a minimum 1/8" (3 mm) and expose the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

All concrete must possess an open surface texture with all curing compounds and sealers removed.

**Exposed Reinforcement Steel**-Exposed rebar may be treated with an anti-corrosion coating such as CORR-BOND or EUCO #452 LV epoxy. Remove all loose rust and scaling, preferably by sandblasting to white metal prior to coating the rebar.

**Bonding**-After the surface has been prepared, all areas must be primed with a bond coat of VERTICOAT or CORR-BOND.

**Bond Coat**-Mix VERTICOAT as instructed. Add up to one pint (0.5 liter) of FLEX-CON bonding agent and one pint (0.5 liter) of water per unit to the mix. Brush the bond coat on to the prepared and pre-dampened concrete. Apply the VERTICOAT topping before the bond coat has dried.

**Mixing**-Small quantities 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) - 90°F (32°C). Add the appropriate amount of VERTICOAT LIQUID for the batch size and then add the dry product. Mix for 2-3 minutes. The mixed product should be quickly transported to the repair area and placed immediately.

**Placement**-Place the VERTICOAT while the bond coat is still wet. Trowel VERTICOAT material onto the prepared surface being repaired. Trowel flush with surface and allow to stiffen. Finish to match the surrounding concrete surfaces. Clean tools immediately after use with water.

**Finishing**-Finish the repair material to the desired texture. Do not add additional water to the surface during the finishing operation. If additional liquid is required, use EUCOBAR finishing aid.

**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.

**Shelf Life:** 2 years in original, unopened package.

## PRECAUTIONS / LIMITATIONS

- Do not use at temperatures below 45°F (7°C).
- Store material in a dry place, above freezing.
- Cool temperatures slow setting while warm temperatures speed up set times. Keep this in mind for storage of materials.
- No heavy traffic until the product has cured.
- Keep repair from freezing until a minimum strength of 1000 psi (7 MPa) is reached.



Verticoat 5.03

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