



VERSASPEED

RAPID SETTING HORIZONTAL REPAIR MORTAR

EUCLID CHEMICAL

HORIZONTAL REPAIR

VERSASPEED

MASTER FORMAT #: 03 01 30.71

DESCRIPTION

VERSASPEED is a versatile, single-component, rapid-setting repair mortar for horizontal, and form and pour repair projects. Requiring only the addition of water, **VERSASPEED** is a low shrinkage, high early strength material that is easy to use with an accelerated set time for fast turn-around projects. Repaired areas may be open to standard tire traffic after 2 hours following the final set and an epoxy coating can be applied after 4 hours. **VERSASPEED** is similar in appearance to concrete and is suitable for use in repairing concrete surfaces from approximately 6 mm to 15.2 cm in thickness

PRIMARY APPLICATIONS

- Multi-unit residential
- Bridges
- Loading docks
- Highways
- Warehouses
- Pavements
- Roads
- Parking decks and ramps
- Industrial / commercial / institutional floors
- Form and pour applications

FEATURES / BENEFITS

- Fast set time and quick turnover of projects
- Suitable for interior or exterior applications
- Rapid strength gain
- Economical repairs
- Open to standard rubber-tire traffic after 2 hours at 21°C
- Coat with epoxy after 4 hours at 21°C
- Low permeability "Very Low" coulomb rating
- allowing excellent freeze-thaw damage resistance
- Economical repairs Wide temperature range of applications -7° to 29°C
- Excellent bond to properly prepared sound concrete
- Can be extended up to 50% by weight
- Can contribute to LEED points

TECHNICAL INFORMATION

Typical Engineering Data @ 21° C Compressive Strength

ASTM C 109, 50 mm cubes @ 0.44 gal/50 lb bag

Age	Strength
3 hours.....	24.1 N/mm ²
1 day.....	37.9 N/mm ²
7 days.....	58.6 N/mm ²
28 days.....	68.9 N/mm ²

Flexural Strength ASTM C 348

1 day.....	6.2 N/mm ²
7 days.....	6.9 N/mm ²
28 days.....	7.6 N/mm ²

Freeze/Thaw Resistance ASTM C 666 Procedure A
300 Cycles.....90% relative dynamic modulus

Unit Weight.....approx. 2,245 kg/m³

Linear Shrinkage ASTM C 157 @ 23° C), 50% RH

1 day.....	-0.064%
7 days.....	-0.077%
14 days.....	-0.078%
28 days.....	-0.083%

Chloride Permeability ASTM C 1202

28 days.....900 coulombs (very low)

Set Time ASTM C 403 @ 22°C

Initial Set.....	15 to 30 min
Final Set.....	20 to 40 min

Volumetric Resistivity

28 days.....	41,610 ohm/cm
Final.....	137,100 ohm/cm

SHELF LIFE

2 years in original, unopened package.

PACKAGING

VERSASPEED is packaged in 22.7 kg bags. Yield: 0.01m³ per bag when mixed with 1.6 L of water. **VERSASPEED** may be extended with up to 11.4 kg of clean, SSD, 9.5 mm pea gravel. Approximate Extended Yield: 0.0147 m³ per bag.

SPECIFICATION / COMPLIANCE

Canadian MTQ and MTO

COVERAGE

One unit of **VERSASPEED** will cover approximately 0.41 m² when placed at an average depth of 25 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 equal to CSP 5 - 7 in accordance with ICRI Guideline 310.2. Properly clean profiled area. **Priming:** Soak the repair area with potable water to achieve a saturated-surface dry (SSD) condition. The SSD concrete must be primed with a scrub coat of **VERSASPEED**. The repair must be made before the **VERSASPEED** scrub coat dries out.

Mixing: Single bags may be mixed with a drill and "jiffy" mixer. Use a paddle type mortar mixer for large jobs. All materials should be in the proper temperature range of 15°C to 29°C. Add the appropriate amount of water for the batch size and then add the **VERSASPEED**. The amount of water to be mixed with the **VERSASPEED** is critical. Initially add 1.6 L [1,597 mL] of water per 22.7 kg bag and mix for 2 minutes. If after the initial 2 minutes of mixing, the desired flow is not obtained, no more than 177mL of additional water should be added to the mix in order to achieve more flow. Mix an additional 2 minutes after adding extra water. Use neat material for repairs less than 25 mm in depth. For deeper repairs, up to 15 cm, extend **VERSASPEED** with 11.4 kg of clean, SSD, 9.5 mm rounded pea gravel (#8, ASTM C33). The pea gravel must be dense and non-absorbive per ASTM C127 and non-reactive (ASR) per ASTM C227, C289 and C1260.

Placement: Important The application temperature range of **VERSASPEED** is from -7 to 29°C. For temperatures above 29°C use **VERSASPEED** LS. Allow approximately 15 minutes to mix, place, and finish **VERSASPEED** repair mortar at 22°C. To make repairs; spread with a float, come-a-long, or square tipped shovel to a thickness that is level with the surrounding concrete and then float to the desired contour is attained. Do not use **VERSASPEED** for repairs less than 6 mm deep.

Finishing: Finish the repair material to the desired texture. For an epoxy coating, a broom finish is likely required. Do not add water to the surface during the finishing operation. When steel trowel finishing, it is suggested to allow the repaired area to stand undisturbed until it has reached initial set, approximately 15 to 30 minutes, and then finish with steel trowels. When placing under hot and windy conditions the use of EUCOBAR evaporation retarder is recommended to prevent the loss of surface moisture.

Curing & Sealing: If an epoxy coating will not be applied, wet cure the surface with water and polyethylene sheets at least one day, or use a curing compound. If applying an epoxy coating, it is important to wet cure with wet burlap for at least 2 hours and then allow to air dry 1 hour before coating. **VERSASPEED** can be coated with epoxy systems after 4 hours at 21° C.

CLEAN UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS / LIMITATIONS

- The application temperature range of **VERSASPEED** is -7°C to 29°C.
- Do not use **VERSASPEED** for repairs less than 6 mm deep.
- Do not add water to the surface during the finishing operation.
- Under hot and windy conditions, use EUCOBAR evaporation retarder to prevent surface moisture loss.
- If an epoxy coating will be applied, follow surface preparation procedures as directed by the coating manufacturer.
- In all cases, consult the Safety Data Sheet before use.

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