



VERSASPEED LS

RAPID SETTING HORIZONTAL REPAIR MORTAR

EUCLID CHEMICAL

HORIZONTAL REPAIR

VERSASPEED SL

MASTER FORMAT #: 03 01 30.71

DESCRIPTION

VERSASPEED LS is a versatile, single-component, rapid strength gaining repair mortar for horizontal, and form and pour repair projects. Requiring only the addition of water, **VERSASPEED LS** is a low-shrinkage, high early strength material that is easy to use for fast turn-around projects. Repaired areas may be open to standard tire traffic after 5 hours following the final set. **VERSASPEED LS** is similar in appearance to concrete and is suitable for use in repairing concrete surfaces from approximately 6 mm to 15 cm in thickness. **VERSASPEED LS** is a slower setting version of our popular **VERSASPEED** material.

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 setting time
- Quick turnover of projects
- High early strength
- Suitable for interior or exterior applications
- Open to rubber tire traffic after 5 hours at 21°C
- Can be coated with epoxy after 5 hours at 21°C
- Low permeability; very low coulomb rating allowing excellent freeze-thaw damage resistance
- Wide temperature range for application
- Excellent bond to properly prepared 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.....	24.2 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.....	8.6 N/mm ²

Freeze/Thaw Resistance ASTM C 666 Procedure A
300 Cycles.....80% relative dynamic modulus

Linear Shrinkage ASTM C 157 @ 23°C, 50% RH
28 days.....-0.046%

Chloride Permeability ASTM C 1202
28 days.....1,204 coulombs

Set Time ASTM C 403 @ 22°C
Initial Set.....60 to 90 min
Final Set.....100 to 150 min

Unit Weight
approx. 2,245 kg/m³

PACKAGING

VERSASPEED LS is packaged in 22.7 kg bags. Yield: 0.01 m³ per bag when mixed with 1.6 L of water. **VERSASPEED LS** 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.

SHELF LIFE

2 years in original, unopened package.

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 LS**. The repair must be made before the **VERSASPEED LS** 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 35 °C. Add the appropriate amount of water for the batch size and then add the **VERSASPEED LS**. The amount of water to be mixed with the **VERSASPEED SL** 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, **VERSASPEED LS** may be extended with up to 11.4 kg of pea gravel. This may alter certain engineering properties.

Placement: *Important* The application temperature range of **VERSASPEED LS** is from 10 to 35 °C. Allow approximately 30 minutes to mix, place, and finish **VERSASPEED LS** repair mortar at 22 °C. For making repairs; spread with a float, come-a-long, or square tipped shovel to a thickness that is level with the surrounding concrete, then float to the desired contour. Do not use **VERSASPEED LS** for repairs less than 6 mm deep.

Finishing: Finish the repair material to the desired texture. For an epoxy coating, a broom finish may be required. Do not add additional 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, then steel trowel as desired. If an evaporation retarder is needed, EUCOBAR is recommended.

Curing & Sealing: When 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. **VERSASPEED LS** can be coated with epoxy systems after 5 hours at 21 °C. Cooler temperatures will increase the time before a coating can be applied

CLEAN UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS / LIMITATIONS

- The application temperature range of **VERSASPEED LS** is 10° to 35°C.
- Do not use **VERSASPEED LS** for repairs less than 6 mm deep.
- Extending **VERSASPEED LS** with 9.5 mm pea gravel may alter certain engineering properties by 15% to 20%.
- Do not add additional water to the surface during the finishing operation. If needed, use EUCOBAR as an evaporation retarder.
- In all cases, consult the Safety Data Sheet before use.

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