



VERSASPEED LS100

RAPID HARDENING HORIZONTAL REPAIR MORTAR WITH EXTENDED WORKING TIME

DESCRIPTION

VERSASPEED LS100 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 LS100** 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 LS100** is similar in appearance to concrete and is suitable for use in repairing concrete surfaces from approximately 1/4" to 6" (6 mm to 15 cm) in thickness. **VERSASPEED LS100** is a slower setting version of our popular **VERSASPEED 100** material.

PRIMARY APPLICATIONS

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

FEATURES / BENEFITS

- Rapid strength gain with extended working time
- Suitable for interior or exterior applications
- Open to light duty traffic as soon as 4 hours
- Coat with epoxy after 5 hours at 21° C
- Micro-fiber reinforced
- Shrinkage compensated and reduced
- Can be placed up to 5 cm neat
- Can be extended up to 50% by weight

TECHNICAL INFORMATION

The following results were developed under laboratory conditions @ 23°C:

PROPERTY	VALUES
Compressive Strength ASTM C109	3 hours 8.3 N/mm ² 5 hours 19.3 N/mm ² 1 day 27.6 N/mm ² 7 days 34.5 N/mm ² 28 days 55.2 N/mm ²
Flexural Strength ASTM C348	1 day 3.7 MPa 7 days 6.9 MPa 28 days 7.6 MPa
Splitting Tensile Strength ASTM C496	7 days 2.1 MPa 28 days 3.3 MPa
Slant Shear Bond Strength ASTM C882 (modified per TXDOT DMS-4566)	1 day 10.3 MPa 7 days 14.5 MPa 28 days 19.3 MPa
Crack Resistance ASTM C1581	Net Time Until Cracking >90 days Stress rate 0.05 N/mm ² / day
Length Change (28 days) ASTM C157*	Air cure -0.030% Water cure +0.013%
Set Time ASTM C266	Initial set 30 - 60 mins Final set 60 - 100 mins
Freeze / Thaw Resistance ASTM C666 Procedure A	3000 cycles >95%
Modulus of Elasticity ASTM C467	28 days 0.036 x 10 ⁶ N/mm ²
Resistivity (FM 5-578)	28 days 31,300 ohm/cm
Abrasion Resistance ASTM C779	28 days 0.48 mm of wear at 1 hr

*Based on initial length @ 24 hours; 7.6cm x 7.6cm x 27.9 cm beams

PACKAGING

VERSASPEED LS100 is packaged in 22.7 kg bags. Yield: 0.011m³ per bag when mixed with 2.6 L of water. **VERSASPEED LS100** 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.

SPECIFICATIONS/COMPLIANCES

ASTM C928 Standard Specification for Rapid-Hardening Cementitious Materials for Concrete Repairs

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 (Concrete Surface Profile) 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 LS100**. The repair must be made before the **VERSASPEED LS100** scrub coat dries out.

Mixing: Single bags may be mixed with a drill and #P2, #P5, or #P6 mixing paddle according to ICRI Guideline No. 320.5. Use a horizontal shaft mortar mixer for larger 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 LS100**. **The amount of water to be mixed with the VERSASPEED LS100 is critical. Initially add 5 pints 2.48 L 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 118 mL of additional water should be added to the mix in order to achieve more flow.** Mix an additional 2 minutes after adding extra water. For deeper repairs, 5 cm to 15 cm), extend **VERSASPEED LS100** with 11.4 kg of clean, SSD, 9.5 mm rounded pea gravel (#8, ASTM C33). The pea gravel must be dense and nonabsorbive per ASTM C127 and non-reactive (ASR) per ASTM C227, C289 and C1260.

Placement: Important-The application temperature range of **VERSASPEED LS100** is from 7° to 35°C. Allow approximately 30 minutes to mix, place, and finish **VERSASPEED LS100** 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. Do not use **VERSASPEED LS100** for repairs less than 6 mm deep.

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 KURESEAL 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 polyethylene sheets for at least 3 hours and then allow to air dry for 2 hours before coating. **VERSASPEED LS100** can be coated with epoxy systems after 5 hours at 21° C.

CLEAN UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS / LIMITATIONS

- The application temperature range of **VERSASPEED LS100** is 7 to 35°C.
- 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

Rev: 11/05/18