

VERSASPEED LS

LONGER SET RAPID SETTING REPAIR MORTAR

DESCRIPTION

VERSASPEED LS is a versatile, one part, rapid setting patching and repair compound 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 with an accelerated set time for fast project turn around. Repaired areas may be open to standard tire traffic in approximately 5 hours following the final set. VersaSpeed LS is similar in appearance to concrete and is suitable for use in patching and repairing concrete surfaces from approximately 1/4" to 6" (6 to 152 mm) in thickness.

PRIMARY APPLICATIONS

- Multi-unit residential
- Warehouses
- Industrial / Commercial / Institutional Floors
- Traffic
- Pavements
- Loading docks
- Roads
- Highways
- Parking decks and ramps
- Form and pour applications

FEATURES/BENEFITS

- Fast set time
- Quick turnover of projects
- High rapid strength
- Economical repairs
- Open to standard rubber tire traffic in 5 hours (at 70°F (21° C))
- Can be coated with epoxy in 5 hours at 70°F (21° C)
- Low permeability - "Very Low" Coulombs rating allowing excellent freeze/ thaw damage resistance
- Wide temperature and environment range of applications
- Excellent bond to properly prepared sound concrete
- Suitable for interior or exterior applications
- Can be extended up to 50% by weight
- Can contribute to LEED points

TECHNICAL INFORMATION

Typical Engineering Data

Compressive Strength ASTM C 109, 2" (50 mm) cubes @ 0.44gal/50 lb bag.*

Age	Strength
5 hours	3,500 psi (24.2 MPa)
1 day	5,500 psi (37.9 MPa)
7 days	8,500 psi (58.6 MPa)
28 days	10,000 psi (68.9 MPa)

Flexural Strength ASTM C 348*

1 day	700 psi (6.2 MPa)
7 days	1,000 psi (6.9 MPa)
28 days	1,250 psi (8.6 MPa)

* Per ICRI Guideline 03740 'Data Sheet' Protocol **Actual performance may vary depending upon water content.

Note: All data was collected in the laboratory under controlled conditions (70°F & 50% humidity). Expect reasonable variations depending on mixing equipment, temperature and curing conditions.

Linear Shrinkage ASTM C 157*

50% R. H. @ 73°F (23°C)	
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)

Freeze/Thaw Resistance ASTM C-666 Procedure A*

300 Cycles..... 100.8% relative dynamic modulus

Set Time ASTM C 403 @ 72°F (22°C)

Initial Set 90 to 120 min

Final Set 120 to 150 min

Unit Weight..... 144 lb/ft³ (2245 kg/m³)

PACKAGING/YIELD

VERSASPEED LS is packaged in 50 lb (22.7 kg) bags. **Yield:** 0.37ft³ (0.01m³) per bag when mixed with .42 gal (1.6 L) of water. VERSASPEED LS may be extended with up to 25 lbs (11.4 kg) of thoroughly washed, damp, sound, non (ASR) reactive # 8 pea gravel. Approximate Extended Yield: 0.52 ft³ (0.147m³) per bag.

SHELF LIFE

2 years in original, unopened package.

COVERAGE

One unit of VERSASPEED LS will cover approximately 4.4 ft² (0.41 m²) when placed at an average depth of 1" (25 mm).



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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 a minimum depth of 1/8" (3 mm) to achieve a surface profile equal to CSP 6 - 7 in accordance with ICRI Guideline 03732. Properly clean profiled area. **Priming:** Clean and prime exposed steel with DURALPREP AC. Concrete should be primed with a spray or brush coat of DURALPREP AC. Alternately, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of VERSASPEED LS. The repair must be made before the scrub coat dries out.

Mixing: Small quantities 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 60°F (15°C) to 95°F (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 LS is critical. Initially add 0.42 gal/54oz (1.6 L/1597mL) of water per 50 lb(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 6 oz (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 patches less than 1" (25 mm) in depth. For deeper patches, VERSASPEED LS may be extended. This may alter certain engineering properties. Contact The Euclid Chemical Company for additional information.

Placement: Important-The application temperature range of VERSASPEED LS is from 40° to 95°F (4 to 35°C). Allow approximately 30 minutes to mix, place, and finish VERSASPEED LS repair mortar at 72°F (22° C). For patching, 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 LS for patches less than 1/4" (6 mm) deep.

Finishing: Finish the repair material to the desired texture. For an epoxy topcoat, a broom finish is 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. If a finishing aid is required, Eucobar is recommended.

Curing/Sealing: When an epoxy topcoat will not be applied, wet cure the surface with water and burlap or polyethylene sheets at least one day, or use a curing compound. **Topping and Sealing** – VERSASPEED LS can be coated with epoxy systems within 5 hours at 70°F (21° C). After curing, if a sealing compound is desired, any of The Euclid Chemical sealing compounds are suggested.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS/LIMITATIONS

- The application temperature range of VERSASPEED LS is 40 to 95°F (4 to 35°C).
- Do not use VERSASPEED LS for patches less than 1/4" (6 mm) deep.
- Extending VERSASPEED LS with #8 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 a finishing aid.
- If an epoxy topcoat will be applied, the repair should be broom finished.
- In all cases, consult the Material Safety Data Sheet before use.