

VERSASPEED LS100

Rapid Hardening Repair Mortar with extended working time

PRODUCT 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 high early strength material that is easy to use for fast turn-around projects. VERSASPEED LS100 is suitable for use in repairing concrete from approximately 6mm to 150mm in thickness. VERSASPEED LS100 provides increased corrosion protection of steel reinforced structures with the inclusion of a corrosion inhibitor and has very low chloride ion permeability.

USAGE / PURPOSE

Fast setting concrete repairs for:

- Industrial, Commercial & institutional floors
- Industrial concrete repairs
- Loading docks
- Highways, roads and bridges
- Pavements
- Parking decks and ramps
- Vertical and overhead form and pour applications

FEATURES & BENEFITS

- Rapid strength gain with extended working time
- Suitable for interior or exterior applications
- Open to light duty traffic in as little as 4 hours
- Overcoat with moisture sensitive coatings after 5 hours @ 21°C
- Contains an integral corrosion inhibitor
- Micro-fiber reinforced
- Can be placed up to 100mm neat and extended with aggregate for large volume placements.



PACKING

20kg Bags

COVERAGE / YIELD

Approximately 9.4lts per 20kg bag at maximum water content.

STORAGE

Store in original, undamaged packaging in a clean, dry, protected location. Shelf life will be 12 months when stored as recommended.

TYPICAL PHYSICAL PROPERTIES

PROPERTY		STANDARD	VALUES
Compressive Strength	3 Hours	ASTM C109	20 MPa
	1 Day		40 MPa
	7 Days		55 MPa
	28 Days		<65 MPa
Flexural Strength	1 Day	ASTM C348	3.7 MPa
	7 Days		6.9 MPa
	28 Days		7.6 MPa
Split Tensile Strength	7 Days	ASTM C496	2.1 MPa
	28 Days		3.3 MPa
Slant Shear Bond Strength	1 Day	ASTM C882	10.3 MPa
	7 Days		14.5 MPa
	28 Days		19.3 MPa
Modulus of Elasticity		ASTM C469 (28 Days)	5.28 x 10 ⁶ psi
Volumetric Resistivity		FM 5-578 (28 Days)	31,300 ohm-cm
Abrasion Resistance		ASTM C779 (28 Days)	0.019 inches of wear @ 1 hour
Length Change*	Air Cure	ASTM C157 (28 Days)	-0.03%
	Wet Cure		0.013%
Setting Time	Initial Set	Gillmore Needles	30 - 60 Minutes
	Final Set		60 - 90 Minutes

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

Note: Compressive strength results published above are typical based on laboratory testing using 50mm cubes and tested at 11% water. Variations of these results can be expected if alternative sample sizes, or test methodology is used.

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INSTALLATION GUIDELINES

Surface Preparation (Concrete)

Vertical & horizontal concrete surfaces must be prepared using acceptable mechanical means and concrete degreasers as necessary to obtain clean, sound and rough concrete surfaces with an exposed coarse aggregate profile. The prepared substrate must be free from oil, grease, surface laitance and any other contaminants. Corroded steel must be fully exposed and cleaned to remove all oxidation & loose rust/scale. To provide maximum bond and avoid feather edging, a minimum saw cut edge of 6mm deep must be provided around the perimeter of the area to be repaired. Prior to placement, soak concrete surfaces thoroughly with potable water leaving the concrete saturated. Remove any excess water.

Reinforcing Steel Priming

Apply one full coat of Eucocrete Zincrich Primer to prepared steel and allow to dry before continuing. If any doubt exists about having achieved an unbroken coating, a second coat should be applied.

Substrate Priming (Horizontal Repairs)

Dependent on the substrate condition, the clean, damp substrate can be primed with a generous coat of Eucocrete Activator, to provide a damp, but puddle free and non-glistening appearance prior to application of the VERSASPEED LS100. Alternatively, apply a scrub coat of VERSASPEED LS100 to the saturated surface dry (SSD) concrete surface to enhance bonding for horizontal repairs. The repair material must be placed onto the scrub coat before it dries out. For areas where superior bonding is required Dural 452 MV epoxy adhesive can also be considered.

Formwork

Formwork shall be rigid, securely anchored & strong enough to resist the forces created during repair mortar placement. Formwork shall be caulked/sealed to prevent leakage during placement. Formwork shall be coated with a suitable form release compound.

Mixing

Mix VERSASPEED LS100 with 2.0 to 2.3 liters of potable water. Single bags of VERSASPEED LS100 may be mixed with a drill and paddle mixer. A mortar or pan mixer should be used for larger repair jobs and/or where the repair mortar is to be extended with aggregate. Do not exceed one-half the maximum capacity of the mortar mixer. Pre-wet mortar mixer & empty excess water. Start by adding 2/3 of the selected, pre-measured water content to mixer. While mixing, slowly add the repair material and mix to a uniform consistency for approximately two minutes. Add remaining water as necessary to achieve desired consistency. Total mixing time should not exceed 4 minutes. Do not exceed maximum water as stated on product packaging or add an amount that will cause segregation. Do not mix more material than can be placed within the working time of the repair material. Do not re-temper the mix by adding additional water. For pours greater than 100mm in depth the VERSASPEED LS100 should be extended with coarse aggregate meeting ASTM C33. Contact customer service on (02) 9638 2755 for aggregate extension guidelines.

Placement

Place the mixed material into the prepared area to be repaired. For horizontal repairs, work the material firmly into the bottom and sides of the repair area to ensure good adhesion. Do not use VERSASPEED LS100 for repairs less than 6mm deep. If placing the material thicker than 100mm, then it should be extended with coarse aggregate as outlined above or placed in multiple lifts. If multiple lifts are to be applied, score the previous lift after placing to provide a suitable mechanical key for the subsequent lifts. Pre-dampen the placed material prior to applying subsequent lifts. Contact customer service on (02) 9638 2755 should you require more detailed placement guidelines.

Finishing and Curing

Finish as necessary. Proper curing procedures are important to ensure the durability and quality of the repair. For best results cure with wet rags and cover with plastic sheeting as soon as the repair mortar has reached its final set and for a minimum of 3 hours where repairs are to be over-coated with moisture sensitive coatings. For form and pour repairs, wet cure exposed repair mortar as soon as the repair mortar has reached its final set. Formwork may be removed as soon as the repair mortar has stiffened or set sufficiently to prevent sagging.

Note: Formwork facilitates curing when left in place for as long as possible. Apply an approved curing compound such as Evencure XDS-NXGEN, or EVENCURE AC immediately after formwork is removed.

PRECAUTIONS / LIMITATIONS

- ❑ For optimum performance material should be conditioned to ambient temperatures of between 15°C and 32°C. Temperature of substrate and equipment should be between 2°C and 32°C
- ❑ Neat material can be placed from 6mm to 100mm thick. Extended material can be placed from 50mm to 150mm per lift (contact customer service on (02) 96382755 for placements over 150mm thick)
- ❑ When working in extreme conditions, follow the recommendations of ACI 305R "Guide to Hot Weather Concreting", or ACI 306R "Guide to Cold Weather Concreting"
- ❑ Do not feather edge, overwork, re-temper or over trowel the repair material.
- ❑ Rate of strength gain is significantly affected by temperature extremes. Published Physical Properties are typical values at ambient conditions.
- ❑ Proper curing is required.
- ❑ In all cases, consult the Safety Data Sheet before use.

HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

TECHNICAL SERVICE

Tremco CPG Australia Pty Ltd has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

Tremco CPG Australia Pty Ltd products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG Australia written instructions and (b) in any application recommended by Tremco CPG Australia, but which is proved to be defective, will be replaced free of charge.

Any information provided by Tremco CPG Australia in this document in relation to Tremco CPG Australia's goods or their use is given in good faith and is believed by Tremco CPG Australia to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. Tremco CPG Australia makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

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