



# RAPID REPAIR SL

**DESCRIPTION:**

Con-Spec's Rapid Repair SL is a unique preblended cementitious self leveling topping and underlayment material that can be used for interior or exterior applications. Rapid Repair SL can be applied from 1/4" - 1 1/4" (5 - 31mm) thick in one application. It will achieve initial set in 90 minutes and be opened to foot traffic after 24 hours at 24°C (75°F). Rapid Repair SL develops high strength, a tenacious bond, and has excellent resistance to freeze thaw cycles and weathering.

**USES:**

Rapid Repair SL is well suited for repair and leveling of concrete floors that are subject to traffic such as garages, warehouse, retail and commercial spaces. It may also be used as a under layment or traffic grade topping for interior or exterior installations.

**CHARACTERISTICS:**

Rapid Repair SL is a high strength material. The product can be extended with 3/8" pea rock for applications greater than 1 1/4" in thickness.

**LIMITATIONS:**

Applications over 1.25" (31 mm) in thickness require the addition of 3/8" (10 mm) stone to a maximum of 9 kg (20 lbs) by weight per 22.7 kg (50 lb) bag. Avoid applying this product if rain is expected within 4 hours. Do not use in temperatures below 10°C (50°F) or when temperature will drop below 10°C within 48 hours of placement. Do not install if freezing temperatures are expected within 72 hours of placement.

**COMPOSITION:**

Rapid Repair SL contains a proprietary cement formulation and specially selected blended aggregates and admixtures. No chlorides are used in the Rapid Repair products.

**COVERAGE:**

Rapid Repair SL is packaged in 22.7 kg. (50 lb) bags and will yield approximately 0.5 cubic feet or 0.014 cubic meters per bag. One bag of Rapid Repair SL at 1/4" thickness will cover approximately 24 ft<sup>2</sup> (12 ft<sup>2</sup> @ 1/2") on flat surfaces.

**APPROVALS AND TESTS:**

ASTM C157 Shrinkage ~ 0.0

ASTM C672 Freeze Thaw Resistance:  
50 cycles: 0.30 Kg/m<sup>2</sup>

Sulphate Resistance: Better than type 50 Portland Cement  
Contains less than 2% C<sub>3</sub>A.

**PROPERTIES: (@23°C)****(@4.25L/22.7Kg Bag)****Compressive Strength (ASTM C109)**

24 Hours Mpa (psi)	22.8 (3300)
7 Days Mpa (psi)	31.9 (4600)
28 Days Mpa (psi)	36.2 (5250)

**Direct Pull Tensile Strength (ASTM C1583)**

28 days Mpa (psi)	3.24 (470)
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<b>Flow Cone (ASTM C-939) (19mm modified)</b>	39 Seconds
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<b>Flow Time</b>	10 minutes
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<b>Initial Set (ASTM C-191 Method A)</b>	90 minutes
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<b>Final Set (ASTM C-191 Method A)</b>	105 minutes
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**SURFACE PREPARATION:**

Surface must be structurally sound, free of loose or deteriorated concrete, dust, dirt, and other contaminants. When substrate is not absorptive, abrade as necessary to ensure proper bonding. Acid etching is not recommended. Mechanical methods of surface preparation such as, shot blasting, sandblasting or diamond grinding are preferred. The surface must be dry and primed.

**JOINTS AND CRACKS:**

Under no circumstances should Rapid Repair SL be installed over any joints or moving cracks. All existing expansion joints, isolation joints, construction joints and control joints (saw cuts), as well as all moving cracks, must be maintained up through the overlay. Failure to do so may result in cracking and/or debonding of the overlay. Even the slightest amount of movement in a control joint will cause the Rapid Repair SL to show a hairline crack in a pattern reflective of the joint. Con-Spec cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

Before proceeding with the installation, all dormant cracks greater than 1/32" (0.7 mm) wide must be prefilled with a fully rigid, high-modulus, 100% solids polyurea joint filler. Please note that the repair material must be sand broadcast to refusal while still fresh and allowed to cure fully prior to removing all excess sand and proceeding with the installation. The filling of dormant cracks as described above is recommended to help prevent the cracks from showing through the topping. However, should movement occur, cracks will reappear.

**Notice to User** - Con-Spec Industries Ltd. warrants that the product described on the face hereof has been manufactured of selected raw materials by skilled technicians. Con-Spec Industries Ltd. shall not be responsible for any claims resulting from the failure to utilize the product in the manner in which it was intended and in accordance with instructions provided for use of product. The only obligation of Con-Spec Industries Ltd. shall be to replace any quantity of this product which proved to be defective. Con-Spec Industries Ltd. assumes no liability, loss, or damage resulting from use of this product. **Your use of this product constitutes your acknowledgment and acceptance of these terms and limitations.**

**PRIMING:**

Apply Rapid Repair Primer at a rate of 200 square feet per gallon to the prepared surface. Allow primer to dry before installing Rapid Repair SL. Apply within 4 hours of priming.

**MIXING INSTRUCTIONS:**

One bag of Rapid Repair SL will require 4.25 liters of potable water. Add 3.75L of water to mixing pail, slowly add the bag of Rapid Repair SL and mix until smooth, add remaining 0.5L of water. Mix an additional 1-2 minutes until the mixture is smooth and lump free. Avoid mixers that entrap large amounts of air. Mixed Rapid Repair SL should be used within 20 minutes at 21°C. Maintain material temperature above 10°C.

**APPLICATION TECHNIQUES:**

Arrange work area to permit continuous placement without cold joints. Pour or pump the Rapid Repair SL onto the prepared and primed substrate at a minimum thickness of 1/8", or 1/4" for vehicle traffic. It will flow and level out within its 10-15 minute flow life. If necessary use a gauge rake, spreader, smoother or other tools to coax the material into place as required. Use a porcupine type roller to remove any entrapped air.

For thickness greater than 1/4", extend each 22.7 Kg (50 lb) bag of Rapid Repair SL with 9 Kg (20 lb) of clean, dry 3/8" pea gravel. Place the extended material to 1/4" below desired floor level and then place neat Rapid Repair SL for the final 1/4" within 24 hours.

**CURING TECHNIQUES:**

After final set it is recommended that the Rapid Repair SL be sealed with Con-Lith 3. Apply at a rate of 300 square feet per gallon. For best results apply 2 coats, allow to dry 4 hours before 2<sup>nd</sup> application. Avoid applying this product if rain is expected within 4 hours or if freezing temperatures could occur within 72 hours of application. As with any cementitious material, the above conditions can alter the appearance and performance of the topping.

**NOTES:**

The surface of Rapid Repair SL always must be protected from oil, salt, water and surface wear by applying a suitable protection system, such as a concrete sealer or paint; such as a second coat of Con-Lith 3. Traffic can proceed as soon as the sealer has dried.

For areas to receive heavier traffic, as well as areas such as restaurants and food courts, sealing should be done using an appropriate wear protection coating. As the performance of coating systems varies greatly, the installer is responsible for assessing the suitability of these coatings. The coating can be applied to the surface of the Rapid Repair SL after 24 hours at 21°C (70°F).

Foot traffic can proceed as soon as the sealer/coating has cured in accordance with manufacturer recommendations. Avoid vehicular traffic for a minimum of 48 hours after the Rapid Repair SL has been installed.

If Rapid Repair SL is being used as an underlayment that will receive a finish floor covering, allow the Rapid Repair SL to cure 24 hours (70°F) prior to proceeding with the flooring installation.

Drying time is a function of jobsite temperature and humidity conditions and the installation thickness. Low substrate temperatures and/or high ambient humidity will extend the drying time. Adequate ventilation and heat will aid drying. Forced drying can dry the surface of the underlayment prematurely and is not recommended.

**CRACKING:**

Rapid Repair SL is formulated as a highly durable, nonstructural wear surface. As such, it is important to note that no one can predict with 100% accuracy the appearance of cracking in a nonstructural topping. While there can be several causes for cracking, it must first be understood that the installation of thin layers of non-structural toppings are not capable of restraining movement in the structural slab, which could lead to reflective cracking. Conditions most likely to lead to crack telegraphing include deflection of a concrete slab; vibration of a concrete slab, such as that due to truck traffic and subways in metropolitan areas; swaying or "racking" of substrates in high rise buildings due to wind; existing cracks in the substrate; control joints or saw-cuts; expansion joints; abutment of dissimilar substrates; embedded metal ductwork and/or small cracks off of the corners of metal inserts, such as electrical boxes or vents in the floor. We know of no method to prevent this telegraphing from occurring.

Additionally, certain jobsite conditions can lead to hairline cracking, also known as map cracking or crazing. Hairline cracking, while aesthetically unpleasant, typically does not affect the overall performance of the topping. The most common cause of hairline cracking is overly rapid moisture evaporation from the topping during cure, which tends to happen when ambient humidity in the space is very low and/or air is moved rapidly over the surface of the topping. Hairline cracking also can occur when there is slight substrate movement while the topping cures.

If cracking occurs, we recommend sounding the affected areas to ensure that the topping is well bonded to the substrate. As long as the topping is well bonded, its overall performance will not be affected.

**CLEAN UP:**

Clean application tools and mixing equipment with water immediately following use.

**SAFETY PRECAUTIONS:**

Product contains cement and is alkaline on contact with water. Wear dust, skin, and eye protection. Irritating to eyes and skin. Avoid splashing into eyes or contact with skin. In case of eye contact, flood eyes repeatedly with water and call a physician immediately. DO NOT RUB EYES! Wash hands thoroughly with soap and clean water after handling. Do not take internally. Keep out of reach of children. Consult Safety Data Sheet for further information.