



Technical Data Sheet

Rapid Set 54

Concrete Repair Compound



Product

Rapid Set 54 is a fast setting and self drying polymer modified cement mortar providing high early and final strength characteristics with minimal shrinking and good adhesion.

Description

Rapid Set 54 is designed for general repair work to concrete or masonry, filling and patching cracks, holes and other defect and as a stand alone repair. Rapid Set 54 has good adhesive qualities that allow good bonding to clean concrete or broken masonry surfaces as well as a range of construction surfaces.

Recommended Uses

- Repairs to damaged concrete floors or stairs or where overlays or coating are required soon after repair.
- Repairs requiring quick hardening and strength gain characteristics.
- Where good adhesive properties are required.
- Where carpet, tiles, vinyl sheeting are required to be installed promptly after repairs.
- Can be feathered to .5mm and applied to 10mm thick in a single application.
- Can be bulked up with sand or aggregate for deeper repairs.

Features & Benefits

- Accepts traffic in 1 hour.
- Very fast setting.
- Single component product.
- Rapid curing and self drying.
- Can be applied directly onto cleaned sound surfaces.
- Adhesive characteristics
- Can be bulked up with the addition of coarser fillers.
- Low slumping.

Performance Properties

Typical Compressive Strength

Tested in accordance with AS1012.9 at 20C and AS2073

Age	Compressive Strength
1 day	>20 Mpa
28 days	>35 Mpa

Typical Flexural Strength

Tested in accordance to ASTM C348 at 20C

Age	Flexural Strength
28 days	> 6 Mpa

Typical Bond Strength

Tested in accordance to ASTM C882

Age	Compressive Strength
28 days	> 5 Mpa

Typical Setting Times

Vicat setting times at 20C

Initial Set	20C	30-40 minutes
28 days	30C	20-30 minutes

Typical Working Time

Temp	Time (minutes)
20C	15-20 minutes
30C	10-15 minutes

Application Thickness

Minimum	.5mm
Maximum	15mm without (bulking)

Application Temperature

Minimum	5C
Maximum	30C

Traffic Time 20°C

Foot Traffic	1/2-1 hours
Vehicle Traffic	2-3 hours
Time to cover with protective coating	1-2 hours

Approx. water requirement per 20kg bag

	Trowellable	Flowable
Range	2.6-3.0 litres	3.2-3.8 litres

Coverage

The approximate coverages are obtained if mixed in accordance with recommended procedures and measured water.

Thickness	Area m ² per 20kg bag
2mm	6.0
5mm	2.5
10mm	1.2

Application Instructions

Surface Preparation

Rapid Set 54 can be applied to most surfaces provided they are clean, have some texture to the surface and have some but not excessive porosity.

Worn or trafficked surfaces should be abraded to expose a clean surface to aid adhesion. Highly porous substrates should be dampened but not wet, alternatively Sure Level primer should be applied to very dense or very porous substrates to aid adhesion.

Mixing

Rapid Set 54 is added to the mixing water in the mixing container and mixed by hand or mechanically until a lump free mortar of the desired consistency has been obtained. The setting characteristics of the Rapid Set 54 are greatly accelerated when stiff or dry mortars are required or large quantities are mixed. Care must be taken to affect the intended repair quickly before the mortar sets.

For deeper repairs above 15mm or when Rapid Set 54 is required to be extended in volume, clean concrete sand may be added at 1 part to 3 parts mortar or 1 part clean aggregate (max 10mm) to 1 part mortar, the water requirement will vary when bulking is employed. Avoid using excessive water or excessive fluidity.

Application

Repairs may be affected by applying the mortar to holes, cracks and crevices with a trowel. Large cavities should be clean and trimmed or belled where required, to ensure retention.

Repairs to corners or edges may be affected by ramming the mortar into position with gloved hands and trimming the surfaces with a trowel as setting and hardening progresses, taking into account the short working time.





Application of Coatings

Rapid Set 54 will cure rapidly and will rapidly self dry or desiccate. Coatings applied to freshly placed but set mortar may also be depleted of any available water and will finish or look different unless the surface of the new mortar is primed or undercoated.

Curing

No special curing is required under normal conditions. Where repairs are made to working concrete such as stairs or concrete corners under elevated temperatures, the repaired mortar surface should be sealed by brushing with diluted 1 to 2 parts Sure Level Primer.

Precautions

- New concrete surfaces must be at least 14 days old prior the repair or application of Rapid Set 54 to avoid differential shrinkage effects.
- Cracks in the repaired substrate that are active may reflect into the Rapid Set 54 repair.
- Rapid Set 54 is not intended for repairs to wet substrates.
- Substrates subject to rising damp or moisture must be waterproofed with a suitable barrier or coating.

Clean Up

Rapid Set 54 will adhere to tools and equipment. Clean with water immediately after use.

Storage

Rapid Set 54 is packaged in poly lined paper sacks and has a shelf life of approximately 8 months if kept dry.

Health and Safety

This product is classified as hazardous according to criteria of Work Safe Australia. Material containing Portland Cement and sand now fall into this category. Continuous or extended contact with this product may cause irritation as well as respiratory issues such as bronchitis or silicosis.

- During use avoid inhalation of dust, contact with skin and eyes.
- Suitable protective clothing, dust masks, gloves and eye protection should be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes. Contact Poisons Information Centre or consult medical adviser.
- Material Safety Data Sheets (MSDS) are available on request from the Sure Level office.
- Read the MSDS and product data sheet carefully before using any product.

Disclaimer

Please Note: Recommendation and advice regarding the use of this product is to be taken as a guide only and Sure Level Pty. Ltd. shall not be liable for any inaccuracy in the information or for any loss, injury or damage whatsoever resulting from its use. To the full extent permitted by law, Sure Level Pty. Ltd. liability is limited at it's discretion, to the replacement of the goods or the supply of equivalent goods.

Fire

Rapid Set 54 is non flammable.

Part Number

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