



Technical Data Sheet

Normal Set 40

Floor Smoothing Underlay



Product

Normal Set 40 is a self levelling modified cementitious underlay.

Description

Normal Set 40 is a rapid hardening self levelling single component cementitious underlay. Normal Set 40 has been formulated to achieve a smooth flat surface with ease of application and maximum flow without any shrinkage or cracking.

Recommended Uses

- Underlayment for floor coverings such as carpet, ceramic tiles, etc.
- Fast repairs of uneven concrete floors.
- Residential, commercial and medium industrial application.
- Application thickness of feather edge to 30mm in a single application.
- New construction and refurbishment projects.
- Flat smooth surfaces over existing concrete slabs.
- Levelling existing uneven concrete floors.

Features & Benefits

- Accepts foot traffic within 2 hours at 20C.
- Reinstating large areas in relative short time periods.
- Very fast application.
- Dimensionally stable.
- Single component product.
- Installation can be carried out in one application.
- Rapid curing.
- Can be applied directly onto prepared concrete surfaces.
- Eliminates the need for sand and cement screeds.
- Floor covering can be applied next day.

Performance Properties

Typical Compressive Strength

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

| Age | Compressive Strength |
|---------|----------------------|
| 1 day | 10-15 Mpa |
| 28 days | 25-35 Mpa |

Typical Flexural Strength

Tested in accordance to ASTM C348 at 20C

| Age | Flexural Strength |
|---------|-------------------|
| 28 days | 3-6 Mpa |

Typical Flowability

Tested in accordance to BS890 flow cone at 20C

| | |
|------|-----------|
| Flow | 200-300mm |
|------|-----------|

Typical Bond Strength

Tested in accordance to ASTM C882

| Age | Bond Strength |
|---------|---------------|
| 28 days | > 5 Mpa |

Typical Setting Times

Vicat setting times at 20C

| | | |
|-------------|-----|------------|
| Initial Set | 20C | 50 minutes |
| | 30C | 40 minutes |
| Final Set | 20C | 60 minutes |
| | 30C | 50 minutes |

Typical Working Time

| Temp | Time |
|------|---------------|
| 10C | 40-50 minutes |
| 20C | 30-40 minutes |
| 30C | 20-30 minutes |

Application Thickness

| | |
|---------|--------------|
| Minimum | Feather Edge |
| Maximum | 30mm |

Fresh Wet Density

1850kg/m³ approx. (Tested in accordance to AS1012.5)

Traffic Time 20°C

| | |
|---|-------------------------------------|
| Foot Traffic | 2 hours |
| Vehicle Traffic | 12 hours |
| Time to cover with floor covering (overlay) | <10mm 12-18 hours >10mm 24 hours |
| Check Moisture Content | Max 5.5% prior to installation |

Application Temperature

| | |
|---------|-----|
| Minimum | 5C |
| Maximum | 30C |

Maximum Water Requirement per 20kg Bag (See Mixing)

4.1 litres

Packaging

Normal Set 40 is supplied in a 20kg polylined bag.

Coverage

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

| Thickness | Area m ² per 20kg bag |
|-----------|----------------------------------|
| 2mm | 6.5 |
| 4mm | 3.3 |
| 5mm | 2.6 |
| 6mm | 2.2 |
| 8mm | 1.6 |
| 10mm | 1.3 |
| 13mm | 1.0 |

Application Instructions

Substrate and Surface Preparation

Ensure the concrete substrate is clean and free from oil, grease, sealers, curing compounds, paints, polymer coatings, dust or other foreign (bond breaking) matter. Excess bitumen, adhesive, curing agent or laitance should be removed by light scabbling or mechanical captive shot blasting. Followed by vacuuming to remove debris and dust. Large cracks or holes may be filled using equal parts of Normal Set 40 and clean fine sand made up to a trowellable consistency. Ensure the substrate is primed with Primer SL prior to carrying out application. New concrete floors must be at least 14 days old prior to application of Normal Set 40. Note: - New concrete floors need to be less than 5.5% moisture content prior to Normal Set 40 application.





Priming

Prime clean dust free concrete substrate with Primer SL Primer using a brush, broom or roller. Allow primer to reach a tacky consistency before applying Normal Set 40.

DO NOT OVER DILUTE PRIMER

Mixing of Sure Level SL Primer

Primer Bottle Content (5 Litre).

Add contents of 5 Litre Primer bottle into a clean empty 20 litre pail. Add 10 litres of clean water to the Primer giving a volume of 15 litres of Primer.

Note: - Do not dilute more or less than 2 parts water x 1 part primer at any time. Apply Primer at 4-5m²/litre per coat.

DO NOT APPLY Normal Set 40 TO UNPRIMED SURFACE

Do not allow dust film to cover primed area prior to application of Normal Set 40. If this occurs the area must be reprimed with Primer prior to proceeding with application of Normal Set 40. For concrete substrates subject to rising damp or moisture a waterproof membrane is required. It is recommended that Moisture Barrier be used as the primer. (Contact office for further details).

Mixing

Normal Set 40 requires 4.1 litres of water. To a clean mixing bucket, add the Normal Set 40 powder to the pre-measured water ensuring product is being mixed during powder addition. When all the Normal Set 40 is added to the water, mix for a further 2-3 minutes until a smooth homogeneous consistency is obtained. Normal Set 40 is supplied in ready to use form requiring only the addition of water. Ensure the product is mixed for a minimum of 5 minutes.

DO NOT MIX BY HAND

Normal Set 40 must be mixed with a mechanical forced action mixer with high shear stirrer.

DO NOT ADD EXCESS WATER

Discard any material that has stiffened.

Placing

Pour the mixed material on the primed substrate and allow material to seek its own level. Material may be spread with a steel trowel, spreader or squeegee. Keep the trowel slightly inclined to obtain desired thickness. To ensure uniform consistency and uniform continuous flow application of Normal Set 40; it is advised that subsequent mixes are ready to enable continuous pouring until the area to be levelled is complete. Protect the finished area from damage until Normal Set 40 has dried. For very large areas Normal Set 40 can also be applied using an automatic pump. (Consult Sure Level office for further information).

Curing

No special curing is required. The addition of water to Normal Set 40 after it has started to stiffen is not recommended and the product must be discarded.

Precautions

- Normal Set 40 must not be used in areas subject to occasional or permanent wetting or where back water pressure is likely.
- Normal Set 40 must not be permitted to come into contact with water at any stage during use.
- Normal Set 40 is not designed as a wearing course or as a water proofing agent, and should only be used as an underlayment.
- To avoid too rapid drying, protect applied Normal Set 40 from direct sunlight or drying winds during actual application, and while curing for up to 12 hours.
- If the substrate on to which Normal Set 40 is applied moves or cracks, reflective cracking will occur in the Normal Set 40.
- Depending on thickness and ambient temperatures Normal Set 40 can be covered with flooring materials in 24 hours.
- For large and thick sections it is advised to check the moisture content of Normal Set 40 prior to application of floor coverings.
- New concrete surfaces must be at least 14 days old prior to application of Normal Set 40. (refer Application Instructions).
- Concrete substrates should be checked for moisture content prior to application of Normal Set.

Substrates

For concrete substrates subject to rising damp or moisture, a water proof membrane barrier coating is required. It is recommended that Moisture Barrier be used as the primer. (Contact Sure Level office).

Yields

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 20kg bag of Normal Set 40 with 4.1 litres of water will yield approximately 13 litres. 77 bags required per cubic metre. A 20kg bag of Normal Set 40 will cover approximately 1.2m² at 10mm thick, or 1m² at 12mm thick, or 2.5m² at 5mm thick.

The recommended application thickness ranges from feather edge to 30mm in a single application. (For very thick sections greater than 30mm Bulk-Fil may be used or consult Sure Level for further information).

Clean Up

Normal Set 40 should be removed from tools and equipment with clean water immediately after use.

Storage

Normal Set 40 has a shelf life of approximately 8 months if kept in a dry environment completely away from moisture.

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 office. Read the MSDS and product data sheet carefully before using any product.
- Small to medium rooms should be well ventilated by means of mechanical fans.

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

Normal Set 40 is non flammable.

Part Number

SLL1001