



NS45 SELF-LEVELLING COMPOUND

TECHNICAL DATA SHEET

Polymer-modified, cement-based self-levelling underlayment for internal floors.

PRODUCT DESCRIPTION

Sure Level NS45 is a premixed, polymer-modified cementitious self-levelling underlayment. When mixed with water, it produces a highly flowable material that levels uneven concrete substrates and provides a smooth, hard surface ready to receive an approved floor covering. NS45 is an underlayment and is not intended as an exposed wearing surface.

FEATURES

- Application from feather edge to 30 mm in one pour.
- High flow and smooth finish.
- Low shrinkage formulation.
- Suitable for manual placement or approved pumping equipment.
- Early walk-on time under normal conditions.
- For residential, commercial and medium-duty internal applications.

TYPICAL APPLICATIONS

- Levelling sound, prepared concrete floors before carpet, resilient flooring, timber flooring or ceramic tiles.
- New construction and refurbishment work.
- Repairing and smoothing localised unevenness in concrete substrates.

SUBSTRATE REQUIREMENTS AND PREPARATION

The substrate must be structurally sound, dry, clean and free from dust, laitance, curing compounds, oil, grease, paint, adhesive residues, sealers and other bond-breaking contamination. Mechanically prepare weak, dense or contaminated surfaces as required. Remove all loose material. Repair cracks, holes and deep defects using a compatible Sure Level repair mortar before application. Honour all existing movement and control joints through the finished system.

Concrete substrates must be sufficiently cured and assessed for moisture before installation. Confirm the moisture limits required by the selected floor-covering and adhesive manufacturers. Where rising damp, hydrostatic pressure or moisture above the floor-covering limit is present, install a suitable moisture-control system before NS45.

PRIMING

Prime the prepared substrate with the appropriate Sure Level Primer in accordance with the current primer data sheet. Apply evenly by brush, broom or roller and avoid ponding. Allow the primer to reach the specified condition before placing NS45. Do not apply NS45 to an unprimed substrate and do not over-dilute the primer.

MIXING

Mixing water: 4.6-4.8 litres of clean potable water per 20 kg bag. Place the measured water into a clean mixing vessel. While mixing with a suitable high-shear mechanical mixer, gradually add the powder. Mix for approximately 2-3 minutes until smooth, homogeneous and lump-free. Allow any short maturation time required by the current batch instructions, then briefly remix. Do not mix by hand, do not exceed 4.8 L water, and do not retemper material that has begun to set.

Cold-weather water adjustment: When the ambient temperature, substrate, mixing water or bagged material is below 10 C, use the lower end of the approved water range (approximately 4.6 L per 20 kg bag). Do not reduce the water below the manufacturer's approved minimum. Cold conditions will slow flow, setting, drying and readiness for floor coverings.



APPLICATION

Pour the mixed NS45 onto the correctly primed substrate and spread to the required thickness using a smoother, gauge rake, steel trowel or squeegee. Maintain a wet edge and organise mixing so that successive batches are placed continuously. A spiked roller may be used where appropriate to assist air release and blending. Protect freshly applied material from direct sun, strong airflow, rapid drying, water and traffic until sufficiently hardened.

APPLICATION DATA

Property	Typical value
Mixing water	4.6-4.8 L per 20 kg bag
Application thickness	Feather edge to 30 mm in one application
Initial set at 23 C	Approximately 50 minutes
Final set at 23 C	Approximately 90 minutes
Foot traffic at 23 C	Approximately 2 hours
Floor-covering installation	Typically after 24 hours; confirm moisture condition and covering requirements

Values are typical laboratory results and may vary with water addition, substrate, thickness, temperature and humidity.

PERFORMANCE PROPERTIES

Age	Typical compressive strength
1 day	25.3 MPa
28 days	40.8 MPa

Performance values are typical laboratory results and are not minimum specification limits.

COVERAGE

Approximate consumption is **1.8 kg/m² per mm thickness**. Coverage assumes a flat substrate and excludes wastage.

Thickness	Approx. coverage per 20 kg bag
1 mm	11 m ²
3 mm	3.7 m ²
5 mm	2.2 m ²
10 mm	1.1 m ²
20 mm	0.55 m ²
30 mm	0.37 m ²

LIMITATIONS

- Internal use only unless a complete, specifically approved external system is documented.
- Not a wearing course and not a waterproofing membrane.
- Do not use where subject to permanent wetting, rising damp or hydrostatic pressure without an approved system.
- Do not bridge movement joints or active cracks.
- Do not add cement, sand, admixtures or excess water.
- Below 10 C, use approximately 4.6 L water per bag and allow additional setting and drying time.
- Drying and covering times increase at lower temperature, higher humidity and greater thickness.
- Verify compatibility with the proposed primer, adhesive, floor covering and substrate.



PACKAGING, STORAGE AND SHELF LIFE

Packaging: 20 kg bag.

Storage: Store unopened bags off the floor in a cool, dry, well-ventilated location protected from moisture.

Shelf life: Approximately 8 months from manufacture when stored as recommended in the original unopened packaging.

CLEAN-UP

Clean tools and equipment with water immediately after use. Hardened material must be removed mechanically.

HEALTH AND SAFETY

This product contains cementitious material and silica. Avoid breathing dust and contact with skin and eyes. Wear suitable protective gloves, clothing, eye protection and respiratory protection selected in accordance with Australian Standards and the site risk assessment. Refer to the current NS45 Safety Data Sheet before use. Poisons Information Centre: 13 11 26 (Australia).

TECHNICAL SUPPORT AND DISCLAIMER

The information in this data sheet is based on available knowledge and typical testing at the issue date. Site conditions and application are outside Sure Level's control. Users must confirm product suitability, follow the current documentation and conduct appropriate trials. To the extent permitted by law, liability is limited to replacement of the goods or supply of equivalent goods.

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