

TECHNICAL DATA SHEET

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INTRODUCING SMART LEVELING[®] CONCRETE:

A premium, high-strength cement-based solution designed for effortless leveling and repair of interior concrete, plywood, and other authorized floor surfaces. With its regular-setting formula, **SMART LEVELING[®]** ensures convenience and simplicity in application. Once fully cured, it delivers a flawlessly smooth and level surface, ready for the installation of a diverse range of floor coverings.

FEATURES AND BENEFITS:

- **Convenience:** Simply mix and pour.
- **Smooths and Flattens:** Achieves a leveled surface for interior floors.
- **Creates a Flat, Hard Surface:** Upon curing, provides a firm and smooth base for various floor-covering materials.
- **Versatile Compatibility:** Compatible with a wide array of tile and stone mortars, floor-covering adhesives, as well as epoxy and polyurethane adhesives.
- **Adjustable Thickness:** Can be poured from 1/8" to 1" (3 mm to 2.5 cm) thick in a single application.
- **Quick Ready Time:** Ready for ceramic tile or stone installation in just 24 hours.
- **Suitable for Various Floor Coverings:** Ready for other types of floor coverings within 2 to 3 days after application.
- **Easy Mixing:** Requires water only for mixing.

SUITABLE SUBSTRATES:

- **Fully Cured Concrete:** Sound, dimensionally stable concrete at least 28 days old and free from hydrostatic pressure.
- **Floor Surfaces:** Ceramic tile, VCT, cement or epoxy terrazzo, and thin layers of old cutback adhesive residue that are well-bonded and dimensionally stable.
- **Exterior-Grade Plywood Subfloors:** In accordance with the most recent edition of Tile Council of North America (TCNA) Handbook's F185 specification.
- For substrates or conditions not listed, please contact **SMARTSTONE®** Technical Services Department for installation recommendations.

WHERE TO USE:

- **Residential and Commercial Interior Floors:** Ideal for flattening, smoothing, and repairing before installing final floor coverings.

LIMITATIONS:

- **Dry, Interior Areas Only:** Not suitable for exterior or wet areas.
- **Not a Wear Surface:** Must be covered with tile, stone, or other final floor-covering material.
- **Moisture-Vapor Emission Rate (MVER):** For substrates with an MVER exceeding 5 lbs. per 1,000 sq. ft. per 24 hours.
- **Temperature Range:** Ensure substrate and ambient room temperatures are between 50°F and 95°F before application. Maintain temperatures within this range for at least 72 hours post-installation.
- **Non-Dimensionally Stable Substrates:** Do not install over particleboard, chipboard, Masonite, Luan, OSB, metal, asbestos, gypsum-based patching materials, or any other non-dimensionally stable materials.
- **Compatibility Testing:** Test compatibility, bond strength, and performance of the complete flooring system in a small area before full application.
- **Asbestos:** Do not install over substrates containing asbestos.
- **Surface Preparation:** Mechanical profiling and surface cleaning are crucial. Follow ICRI CSP #3 standards for concrete surface preparation. Fill deep areas and cracks appropriately. Thoroughly clean the surface before priming.
- **Priming:** Prime the floor with **PRIMER BOND® 7** and let it dry before application.
- **Plywood Flooring:** Follow TCNA F185 guidelines. Use a lath or diamond mesh on top of the primed surface before applying **SMART LEVELING®** over plywood flooring
- **MIXING:** Before using the product, ensure appropriate safety measures. Refer to the Safety Data Sheet for details.

GENERAL MIXING:

- In a clean mixing container, add 5 to 5.28 U.S. quarts (4.73 to 5.0 liters) of cool, clean, potable water. Chill water to 70°F (21°C) if necessary.
- Slowly add 50 lbs. (22.7 kg) of Self-Leveler Plus powder while mixing with an "egg-beater" mixer and electric drill. Once all powder is added, mix at high speed (900 to 1,100 rpm) for 2 minutes.
- Maintain a consistent water/powder ratio. Avoid overwatering the material.

PUMP MIXING (FOR PROFESSIONAL USE ONLY):

- **SMART LEVELING**[®] can be mechanically mixed using the above ratio. Use a continuous mixer and pump or a batch mixer and pump.
- Ensure mixer and pump are in good working condition and clean them periodically per the manufacturer's instructions.
- Pressure-test the rotor and stator for proper mixing.
- Use a mesh screen "sock" at the end of the hose to catch any foreign material entering the mixer hopper.

PRODUCT APPLICATION: (READ ALL INSTRUCTIONS THOROUGHLY BEFORE INSTALLATION).

- Consider using conventional piston, rotor-stator, or underlayment pumps for easier and more efficient application over large areas. Contact **SMARTSTONE**[®] Technical Services Department for recommendations.
- Close doors and windows, and turn off HVAC systems to prevent drafts during application and curing. Protect from direct sunlight.
- Work as a team to provide a continuous flow of wet material to avoid trapping air or creating cold joints.
- Maintain a wet edge throughout placement. Adjust pour width accordingly.
- **SMART LEVELING**[®] has a flow time of approximately 10 minutes at 73°F (23°C) and can be applied from 1/8" to 1" (3 mm to 2.5 cm) in a single application. Apply enough material to cover high spots adequately.
- Spread with a gauge rake immediately after placing. Smooth the surface with a smoother to achieve an even surface. Avoid overworking the material to prevent air entrapment.
- **For professional use only:** **SMART LEVELING**[®] may be extended with 1/4" to 3/8" (6 to 10 mm) of clean, saturated surface-dry (SSD) aggregate or added directly to the mix (up to 30% by weight) for certain applications. Use clean, nonreactive aggregates only.

EXPANSION AND CONTROL JOINTS:

- Provide expansion and control joints as specified, including at the perimeter of the room, columns, supports, and equipment pedestals. If these joints don't exist in the substrate, include them in the system according to TCNA EJ 171.
- Do not bridge substrate joints. Cut joints in **SMART LEVELING**[®] at least 1/4" (6 mm) wide within 24 hours of application.

CLEANUP:

- Wash hands and tools with water promptly before the material hardens. Mechanically remove cured material.
- Applications in cooler temperatures may require extended curing time before installing floor-covering materials.

CURING:

- **SMART LEVELING**[®] is self-curing; avoid using damp-curing methods or curing and sealing compounds.

PROTECTION:

- Protect from excessive heat or drafts during curing. Turn off forced ventilation and radiant-heating systems. Protect for up to 24 hours after completion.
- Protect from traffic, dirt, dust, and other trades until **SMART LEVELING**[®] has fully cured and the final flooring has been installed.
- Avoid heavy loads for at least 72 hours after installation.
- Product Performance Properties Laboratory Tests Results.

SMART LEVELING[®] **SPECIFICATIONS:**

BEFORE MIXING:

- Physical State: Powder
- Color: Gray

Mixed at 73°F (23°C) and 50% Relative Humidity:

- Mixing Ratio: 5 to 5.28 U.S. quarts (4.73 to 5.0 liters) of water per 50 lbs. (22.7 kg) of powder
- Density: Approximately 128 lbs. per cubic foot (2.1 kg per liter)
- pH: 11

Application Temperature Range: 50°F to 95°F (10°C to 35°C)

- Flowing Time: 10 to 15 minutes
- Final Set: > 4 hours
- Time Required Before Installation of Tile or Stone: Typically 24 hours
- Time Required Before Installation of Other Floor Coverings:
 - Up to 1/4" (6 mm) thickness: Typically 24 hours
 - 1/4" to 1/2" (6 to 12 mm) thickness: Typically 2 to 3 days, depending on temperature and humidity

- Compressive Strength (ASTM C109 / CAN/CSA-A5):
 - 7 days: > 2,700 psi (18.7 MPa)
 - 28 days: > 4,200 psi (30.0 MPa)
- Pull-Out Strength (Direct Tensile Bond Test - Rupture in Concrete Substrate):
 - 7 days: > 300 psi (2.11 MPa)

SHELF LIFE AND APPLICATION PROPERTIES:

- **Shelf Life:** 1 year in unopened, original bag in a dry, heated, and covered area.

PACKAGING SIZE:

Bag: 50 lbs. (22.7 kg)

Approximate Coverage per 50 lbs. (22.7 kg):				
Thickness	1/8" (3 mm)	1/4" (6 mm)	1/2" (12 mm)	1" (2.5 cm)
Coverage	48 sq. ft. (4.46 m ²)	24 sq. ft. (2.23 m ²)	12 sq. ft. (1.11 m ²)	6 sq. ft. (0.56 m ²)

Note: Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions, type of equipment, thickness applied, and application methods used.

FOR TECHNICAL SERVICES

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End of Technical Data Sheet