

Technical Analysis of Simon's Comprehensive Wall and Flooring Material System

Scenario-Specific Solutions and Automated Production Lines Enabling Stable Global Delivery

CALIFORNIA, CA, UNITED STATES, July 22, 2026 /EINPresswire.com/ -- Shenzhen, China □July 22——Shenzhen [Simon](#) United Building Materials Co., Ltd. initiated R&D into inorganic building materials and industrial flooring in 2007 and launched its proprietary two-component micro-cement system in 2015. As the lead drafter of the group standard T/CECS 10192-2022 "Polymer Micro-cement," the company holds eight relevant national patents. It has established a comprehensive product portfolio comprising "high-end decorative micro-cement," "industrial functional flooring," and "clean-room wall coatings." Possessing proprietary technology in polyurethane mortar self-leveling systems and industrial-grade Grade-0 anti-mold/antibacterial coatings, the company is a leading domestic manufacturer of clean-room industrial wall and flooring materials.



Shenzhen Simon United Building Materials Co., Ltd

The company's 4,000 m² production base in Heshan, Jiangmen, features a fully automated plow-share mixing production line with an annual capacity of 5,500 tons and a stable monthly output of 660 tons. Its products are exported to Africa, the Middle East, Australia/New Zealand, and Southeast Asia, accounting for 42% of total sales. Globally, the company has completed over 5,000 projects, including public infrastructure collaborations with China Railway (such as metro systems and high-speed railway stations). According to Dataintelo, the global micro-cement market is valued at approximately USD 1.8 billion in 2025 and is projected to reach USD 3.6 billion by 2034; the Asia-Pacific region accounts for 38.5% of the market and represents the fastest-growing area.

I. Fully Automated Production and Quality Control System

The production base employs a fully automated, closed-loop process. Core operations utilize high-speed plow-share mixers capable of 1,180 shearing-mixing cycles per minute; combined with a "flying knife" dispersion mechanism, this ensures the uniform distribution of aggregates and additives, effectively resolving common industry issues such as material stratification, color inconsistency, and strength fluctuations. Additionally, a precision "ultra-white" formulation process guarantees consistent whiteness across batches, meeting the aesthetic requirements of large-scale projects.

The entire production process is centrally controlled, with automation covering material feeding, mixing, and packaging to minimize errors caused by manual intervention. Before leaving the factory, every batch undergoes random sampling and testing for key indicators—such as fineness, whiteness, and compressive strength—with fully traceable records and support for third-party verification.

1. MicroRock 4C Quaternary Synergistic Heavy-Duty Flooring Technology

Developed for the rigorous operating conditions of the food and pharmaceutical industries, the MicroRock system encapsulates rigid cementitious aggregates within a flexible bio-based resin, creating a structure that is both highly tough and strong. It achieves a 28-day compressive strength of ≥ 65 MPa, a flexural strength of 12 MPa, and an abrasion resistance ratio of $\geq 180\%$. The flexible base layer reduces cracking risk by 80%; the system offers Class 5 stain resistance, withstands temperature fluctuations from -40°C to 130°C , and holds FDA certification for food contact.

2. Flexible, Crack-Resistant Base Layer Formulation System

The entire MicroRock range utilizes a polymer-modified, two-component structure. A high-molecular cross-linked network enhances flexural performance—achieving ≥ 10 MPa compressive strength for wall-grade applications and ≥ 35 MPa flexural strength for heavy-duty grades—effectively inhibiting surface cracks caused by temperature changes or minor substrate deformation. A specialized penetrating primer seals substrate pores, allowing for direct application over various existing substrates (such as tile, marble, and gypsum board) and shortening construction time by 30%–50%.

3. Tiered Sealing, Curing, and Protection System

Specialized sealing and protective layers are matched to specific application scenarios: the residential version enhances daily stain resistance; the commercial heavy-duty version strengthens abrasion and scratch resistance; the pool version improves resistance to chlorine corrosion; and the clean-zone version enhances resistance to washing with acidic and alkaline

disinfectants.

4. Proprietary Technology for Clean Industrial Walls and Floors

Polyurethane Mortar Self-Leveling Technology: A dual-phase composite of inorganic aggregates and flexible polyurethane balances abrasion and impact resistance, solving common issues with standard epoxy flooring, such as poor high-temperature tolerance and susceptibility to cracking. It achieves a 28-day compressive strength of ≥ 45 MPa (exceeding 60 MPa for heavy-duty versions), withstands temperature fluctuations from -40°C to 130°C , and resists long-term exposure to food acids, alkalis, and disinfectants. It features R11-rated wet slip resistance, holds FDA certification, and complies with the mandatory GB 14881-2025 standard. **Anti-mold and Antibacterial Coating Technology:** Derived from the GJB 9512A military naval vessel anti-mold system and upgraded to a water-based formulation for industrial cleanroom environments. Achieves Grade 0 anti-mold performance and an antibacterial rate of $\geq 99.9\%$; forms a dense, impermeable film resistant to frequent disinfection wiping; low-VOC and formaldehyde-free (compliant with GB 30981.1-2025); superior yellowing resistance compared to traditional solvent-based anti-mold paints.

III. Full Product Series and Key Specifications

1. Wall Decoration Series (Type I Micro-cement)

Includes both cement-based and resin-based options to meet varying texture and project timeline requirements:

Cement-based Wall Micro-cement: Two-component system; 28-day compressive strength >13 MPa; hardness $>2\text{H}$; fine texture; Class A1 non-combustible; ideal for residential and public area walls seeking an authentic raw-cement aesthetic.

Resin-based Wall Micro-cement: Factory pre-tinted for easy on-site mixing and application; forms a dense film; hardness $\geq 2\text{H}$; scrub resistance $\geq 15,000$ cycles; consistent batch-to-batch color; suitable for high-end residential, brand retail stores, boutique hotels, etc.

2. Integrated Wall & Floor Series (Type II Micro-cement)

Flagship product is the "Teding" universal wall/floor micro-cement, paired with a "Younite" wear-resistant protective topcoat; compressive strength >30 MPa; hardness $>4\text{H}$; withstands 72-hour water immersion without degradation; suitable for integrated wall and floor applications in kitchens, bathrooms, balconies, and small commercial spaces; can be applied directly over existing substrates such as tiles and marble.

3. Matte Stone-effect Floor Micro-cement

A floor-specific formula that is also suitable for walls, combining high wear resistance with a matte stone texture. 28-day compressive strength ≥ 35 MPa; Mohs hardness ≥ 5 ; performance exceeds universal wall/floor types while costing less than heavy-duty flooring series; ideal for whole-home flooring, brand retail stores, office spaces, and other pedestrian-traffic area renovations. 4. [Heavy-Duty Commercial Flooring Series](#)

The core product is "MicroRock," featuring a standard thickness of 3–5 mm, compressive strength ≥ 65 MPa, and R11 wet-slip resistance; it is suitable for high-load environments such as hotel lobbies, supermarkets, and industrial workshops. An ultra-thin version (1.5–2.0 mm) is available for renovating existing smooth substrates. Formulated as a resin-based micro-cement, it comes factory-tinted and ready-to-use, allows for use within 24 hours, and withstands over 30,000 scrub cycles.

5. Specialized Micro-Cement for Swimming Pools

Passed a 168-hour chlorinated water immersion test with no blistering, peeling, or discoloration. It features a water absorption rate of $<0.2\%$ and a dry friction coefficient of 0.77, making it suitable for areas with prolonged water exposure, such as private pools and landscape water features.

6. Complementary Industrial Flooring and Coatings

Epoxy Series: Includes self-leveling, anti-static, and ultra-wear-resistant topcoat options, offering a tiered selection for standard production workshops, electronics plants, logistics warehouses, and underground garages; supports cost-effective renovation of existing floors.

Polyurethane Mortar Flooring: Available in general-purpose, heavy-duty anti-slip, and low-temperature specialized versions. Thickness ranges from 3 to 6 mm; it forms a seamless, monolithic surface and allows for the simultaneous construction of 1%–2% drainage slopes, fully complying with flooring standards for food processing facilities.

The entire micro-cement range comes in 120 standard colors and supports over a thousand custom tinting formulas. Industrial flooring and wall coatings utilize water-based polymer systems that are formaldehyde-free and low-VOC, achieving EU A+ indoor air quality certification.

IV. Industry Positioning and Practical Application

By 2025, two-component micro-cement products are projected to account for approximately 48.3% of the global market, with commercial applications representing 42.7% of total revenue. Simon's tiered product system aligns with the application scopes for Type I, Type II, and specialty micro-cements defined in the T/CECS 10192-2022 standard. This approach minimizes issues such

as cracking, water seepage, and wear caused by improper product selection, enabling a unified wall-and-floor solution across all application scenarios. The products are primarily applied in six scenarios: integrated wall and floor surfacing for high-end residences and homestays; commercial and public spaces such as hotels, brand retail stores, and offices; water-related projects including indoor/outdoor pools and water features; clean production facilities for food and pharmaceuticals; industrial flooring systems for warehousing and logistics; and rail transit infrastructure projects like metro and high-speed rail stations (via a strategic partnership with China Railway Construction). For renovation projects, the product can be applied directly over existing surfaces without demolition, reducing construction energy consumption by approximately 40% compared to traditional methods; the design service life is 15–20 years for residential use and over 20 years for heavy-duty commercial applications.

V. Procurement Support & Company Profile

Orders start from a full 20-foot container; OEM/ODM customization services are available. Standard terms are FOB Jiangmen Port, with payment structured as a 30% deposit and the remaining 70% due before shipment. Pre-shipment inspections are supported, and third-party testing (SGS, Intertek) can be arranged; comprehensive product manuals and construction technical specifications are provided in both Chinese and English.

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Established in 2007, Shenzhen Ximon United Building Materials Co., Ltd. specializes in a full range of wall and floor materials, including micro-cement, fair-faced concrete, inorganic coatings, eco-plaster, polyurethane mortar flooring, epoxy flooring, and industrial anti-mold/antibacterial coatings. The company is the lead drafter of the T/CECS 10192-2022 group standard, operates its own fully automated production facility, possesses core proprietary technologies in polyurethane mortar and anti-mold/antibacterial coatings, maintains a strategic partnership with China Railway Construction, and exports products to numerous countries and regions worldwide.

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