MSTR UltraC™

0.51 in. (13 mm) Ultra-Thin, High-Performance Fiber-Reinforced Cementitious Architectural Cladding Panel

PRELIMINARY TECHNICAL DATA SHEET

ASTM TESTING IS UNDERWAY | INITIAL RESULTS EXPECTED DECEMBER 2026 (ESTIMATED)

0.51 in. (13 mm)	**3.3-5.1 ksi (23-35 MPa)**	**≤ 1.5%**	**47.2 × 118.1 in. (1,200 × 3,000 mm)**
Nominal thickness	Current in-house flexural MOR*	Current in-house water absorption*	Largest standard sheet

* Preliminary in-house performance data. Independent third-party testing is underway; verified values will be updated following the issued reports.

01 Product Description and Intended Use

MSTR UltraC™ is a factory-manufactured, 0.51 in. (13 mm) nominal-thickness, high-performance fiber-reinforced cementitious architectural cladding panel. The panel combines a high-performance cementitious matrix, POM synthetic microfiber reinforcement, and two layers of alkali-resistant (AR) glass-fiber mesh.

Intended for non-load-bearing exterior cladding and architectural features, UltraC provides a thin cementitious appearance, controlled factory manufacture and reduced dead load, with engineered project-specific fixing.

Product classification: UltraC is a fiber-reinforced cementitious flat-sheet cladding panel. The U.S. product qualification program follows the ASTM C1186 Type A pathway.

02 Product / Façade-System Boundary

UltraC is a cladding-panel component designed for integration into a project-specific engineered façade assembly. Panel layout, attachment, subframing, joints, drainage, building movement and applicable structural and fire requirements are coordinated with the project design team. Where the façade contractor provides the fixing and support system, UltraC can be coordinated with the approved project interfaces.

03 Material Technology

Component	Function	Current Technical Basis
High-performance cementitious matrix	Provides material strength, density and an architectural-concrete appearance.	Factory-controlled materials and curing.
POM synthetic microfibers	Support microcrack control, toughness and flexural behavior.	Integrated reinforcement under factory quality control.
Two AR-glass mesh layers	Provide distributed panel reinforcement and continuity.	Factory-controlled reinforcement placement and inspection.

04 Manufacturing Technology

UltraC panels are factory-manufactured using controlled multilayer reinforcement and curing processes, supported by repeatable production and quality-control procedures.

05 Basic Product Specifications

Item	Preliminary Specification	Notes / Limitations
Nominal thickness	0.51 in. (13 mm)	Custom thicknesses are evaluated separately.
Standard manufacturing sheet sizes	47.2 × 94.5 in.; 47.2 × 118.1 in. (1,200 × 2,400 mm; 1,200 × 3,000 mm)	Metric standard sheet formats; project sizes may be factory-cut to approved dimensions.
Custom panel lengths	Longer custom panel lengths may be available for larger-volume orders	Subject to manufacturing feasibility and project requirements.
Factory-cut project panels	Cut to approved project dimensions within available production formats	Subject to approved panel geometry, fixing zones and fabrication requirements.
Finished-panel unit weight	Approx. 5.5-6.8 psf (27-33 kg/m²), current production data	Weight varies with finish and configuration; confirm for each project.
Colors	25 standard base colors; custom colors available	Final color and variation are established by approved samples.
Surface finishes	Natural concrete; light/heavy sandblast; polished; project-specific textures	Selected finishes and treatments to be confirmed for the project.
Intended use	Non-load-bearing exterior cladding / architectural features	Project-specific engineering and approval apply.

06 Preliminary Technical Performance

The following preliminary values are based on current in-house testing and production-development data unless otherwise indicated. Independent third-party testing is underway; relevant published values will be updated following the issued laboratory reports.

Property	Preliminary Value	Reference Test Method	Technical Note
Matrix density	125-150 pcf (2,000-2,400 kg/m³)	ASTM C1185 reference method	Base-matrix density; distinct from finished-panel unit weight.
Compressive strength	13.8-18.1 ksi (95-125 MPa)	ASTM C39/C39M; cast cylinders	Cast-cylinder base-matrix value; not a finished-panel design capacity.
Flexural strength (MOR)	3.3-5.1 ksi (23-35 MPa)	ASTM C1185; finished-panel specimens	Finished-panel specimen; preliminary in-house result.
Static elastic modulus	3,840 ksi (26.5 GPa)	ASTM C469/C469M	Base-matrix cast-cylinder value.
Poisson's ratio	0.20	ASTM C469/C469M	Base-matrix cast-cylinder value.
Water absorption	≤ 1.5%	ASTM C1185	Finished-panel preliminary in-house result.
Freeze-thaw flexural-strength retention	≥ 97% after 50 cycles	ASTM C1185 reference method	Preliminary in-house result after 50 cycles.
Water tightness	No water droplets on underside after 24 hours (in-house)	ASTM C1185 reference basis	Preliminary in-house observation.

07 U.S. Qualification & Testing Status

Independent third-party testing is underway to evaluate the 0.51 in. (13 mm) UltraC panel against ASTM C1186 Type A, Grade IV requirements using applicable ASTM C1185 methods. The program includes flexural, dimensional, moisture and durability testing. ASTM E84 surface-burning and ASTM E136 noncombustibility tests are also underway. Initial laboratory reports are expected in December 2026, subject to laboratory scheduling. Applicable verified results and classifications will be incorporated once issued and reviewed.

08 Dimensional Tolerances

Item	Indicative Manufacturing Tolerance
Thickness	±10% of nominal; approx. ±0.051 in. (±1.3 mm)
Length / width	≤39.4 in.: ±0.039 in. >39.4 in.: ±0.018 in./ft (≤1 m: ±1.0 mm; >1 m: ±1.5 mm/m)
Squareness	Difference in diagonal lengths: <21.5 sq ft: ≤0.12 in.; ≥21.5 sq ft: ≤0.20 in. (<2 m²: ≤3 mm; ≥2 m²: ≤5 mm)
Edge straightness	≤0.018 in./ft (≤1.5 mm/m)
Flatness / bow	Project-specific - to be confirmed

The above values are current manufacturing targets. Final production tolerances will be confirmed based on independent ASTM dimensional test results, factory quality-control records, and project requirements.

09 Design, Engineering and Installation Requirements

- Panel dimensions, supports, fixing type, edge distances, joints and subframing are established through project-specific engineering for applicable loads and building movement.
- Preliminary material test results are not design allowables; attachment and panel design capacities require the responsible project engineer’s review.
- Representative panel, attachment or system testing and suitable mock-ups may be used to validate the selected project configuration.
- Installation coordination addresses dimensional tolerances, drainage, ventilation, interfaces, handling and panel replacement.

10 Samples and Project-Specific Validation

Material samples and representative panels are available for technical review. The product-level qualification program addresses the standard 0.51 in. (13 mm) production configuration within its tested scope. Custom lengths, special finishes, fixing details and façade-system conditions will be assessed as appropriate to the project.

11 Document Status

This preliminary TDS is provided for product evaluation. Published values will be updated following the independent laboratory reports. Final panel configurations, attachment details and façade integration remain subject to applicable project engineering and review.