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SWISSPEARL® FIBER-CEMENT PANEL SYSTEM

CSI Section:
07 46 46 Fiber-Cement Siding

1.0 RECOGNITION

Swisspearl® Fiber-Cement Panel System described in this report has been evaluated for use as an exterior and interior wall covering. The physical, mechanical, durability, weather resistance, wind-load resistance, non-combustibility, and surface burning characteristics of the panel system were evaluated for compliance with the following codes and regulations:

- 2021, 2018, 2015, 2012, and 2009 International Building Code® (IBC)
- 2021, 2018, 2015, 2012, and 2009 International Residential Code® (IRC)
- 2020, 2015, 2012, and 2008 ICC 700 National Green Building Standard
- 2022 California Building Code (CBC) – Supplement attached
- 2022 California Residential Code (CRC) – Supplement attached
- 2022 California Green Building Standards Code (CALGreen) / Title 24 Part 11 – Supplement attached
- 2023 City of Los Angeles Building Code (LABC) – Supplement attached
- 2023 City of Los Angeles Residential Code (LARC) – Supplement attached
- 2023 Florida Building Code (FBC, Building) – Supplement attached
- 2023 Florida Building Code, Residential (FBC, Residential) – Supplement attached

2.0 LIMITATIONS

Use of the Swisspearl® Fiber-Cement Panel System described in this report is subject to the following limitations:

2.1 Installation of the Swisspearl® Fiber-Cement Panel System shall be in accordance with this report, the project details, installation instructions, and the applicable code. If there are any conflicts between the manufacturer’s published installation instructions and this report, the more restrictive shall govern.

2.2 The maximum allowable wind pressure for the Swisspearl® Fiber-Cement Panel System is provided in Table 1 of this report. The capacities of the supporting wall, framing members, and connections shall be equal to or greater than the allowable wind pressure.

2.3 Where installed as exterior cladding on buildings of Type I, II, III, or IV Construction, the Swisspearl® Fiber-Cement Panel System shall be constructed in accordance with Section 3.4 of this report.

2.4 When used as an interior wall covering with spaces between adjacent panels, the Swisspearl® Fiber-Cement Panel System shall be installed over a substrate having a Class A finish, complying with the 2021 and 2018 IBC Section 803.1.2 or 2015 and 2012 IBC Section 803.1.1, as applicable.

2.5 The system shall be installed by qualified installers approved by Swisspearl.

2.6 Maximum panel fastener spacings and fastener contributory area shall be in accordance with Section 3.3 of this report.

2.7 The panel system is manufactured in Nyergesujfalu, Hungary.

3.0 PRODUCT USE

3.1 General: Swisspearl® Fiber-Cement Panels are used as exterior or interior wall covering on buildings of all construction types under the IBC and on buildings constructed under the IRC. A copy of the installation documents shall always be available on the job site during construction.

The Swisspearl® Fiber-Cement Panel System may be used as a non-load-bearing exterior wall covering in accordance with Chapter 14 of the IBC and Chapter 7 of the IRC. The fiber-cement panels may also be used for interior applications as part of a Class A interior wall finish. The panels may be installed on buildings of Types I, II, III, or IV construction when installed in accordance with Section 3.4 of this report.

3.2 National Green Building Standard (ICC 700): The Fiber-Cement panels conform to the prefinished material requirements as defined in Section 601.7 (d) and (e) and Section 11.601.7 (d) and (e) of ICC 700. The compliance and verification of these sections when the product is used is the responsibility of the user of this report and is outside the scope of this report.

3.3 Design: Table 1 of this report provides the allowable wind load for the Swisspearl® Fiber-Cement Panel System when used as an exterior wall covering.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





TABLE 1 – ALLOWABLE TRANSVERSE (WIND) LOAD		
Panel Thickness Installation Method	POSITIVE (psf)	NEGATIVE (psf)
8-mm Visible Attachment System	70	65

SI: 1-inch = 25 mm; 1 psf = 0.0479 kPa

The supporting walls, framing members, and connections shall be designed to resist the loads prescribed by IBC Chapter 16 or IRC Section R301.2, as applicable. The allowable transverse loads for the Swisspearl® Fiber-Cement Panel System shall equal or exceed the design loads. The attachment of the Panel System to walls or substrates shall be designed by a registered design professional in accordance with the limitations described in Section 3.3.1 of this report and submitted to the building official for approval.

3.3.1 8-mm Visible Attachment System: The 8-mm Visible Attachment System shall have Hat-Channels spaced a maximum of 22½ inches (572 mm) on-center horizontally and attached to each stud framing. Each Hat-Channel shall be connected to supporting framing, spaced a maximum of 16-inches (406 mm) on-center, with two self-tapping screws, complying with Section 4.1.2 of this report. Horizontal Z-channel profiles, as described in Section 4.1.3 of this report, shall be secured perpendicular to each Hat-Channel with one self-tapping screw, complying with Section 4.1.2 of this report, and spaced a maximum of 14 inches (357 mm) on-center. The 8-mm Swisspearl® Fiber-Cement Panels are fastened to the Z-Channel profiles with rivets complying with Section 4.1.2 of this report, spaced a maximum of 14-inches (356 mm) on-center horizontally and a maximum of 18-inches (457 mm) on-center vertically with a maximum of 1.75 square feet (0.23 m²) of contributory panel area per rivet. Rivets shall be a maximum of 3-inches (102 mm) from panel edges and panel edges may have a maximum panel overhang of 3-inches (102 mm).

3.4 Installation - General: The Swisspearl® Fiber-Cement Panel System shall be installed in accordance with the design documents, the manufacturer’s published installation instructions, and this evaluation report. Where there is a conflict, the most restrictive requirements shall govern.

Exterior wall assemblies shall include a water-resistive barrier, flashing, and a means for draining water that enters the assembly to the exterior and protection against condensation in accordance with 2021 and 2018 IBC Sections 1403.2 and 1404.4, 2015 and 2012 IBC Sections 1404.2 and 1405.5, and 2009 IBC Sections 1404.2 and 1405.4, or 2021, 2018, and 2015 IRC Sections R703.2 and R703.4, 2012 and 2009 IRC Sections R703.2 and R703.8, as applicable. The Swisspearl® Fiber-Cement Panels may be cut and trimmed in accordance with the design documents and this report. A nominal gap of 3/8 inch (9.5 mm) shall be maintained at panel-to-panel and panel-to-penetration joints, except that horizontal joints and corners may be closed with joint closures and corner closures as decorative elements

when specified by the building designer. The panels may be used for interior applications as part of a Class A interior wall finish.

3.5 Types I, II, III, and IV Construction:

3.5.1 8-mm Thick Panels: The Swisspearl® 8-mm thick panels using the Visible Attachment System as described in this report may be installed on buildings of Types I, II, III, or IV construction under the IBC. Installation on exterior walls is limited to heights not greater than 40 feet (12.2 m) above grade plane when the wall assembly includes a combustible water-resistive barrier. For use with combustible water-resistive barriers at heights greater than 40 feet (12.2 m) above the grade plane, the wall constructions shall be tested in accordance with and comply with the acceptance criteria of NFPA 285, in accordance with Section 1402.5 of the 2021 and 2018 IBC, and Section 1403.5 of the 2015 and 2012 IBC, or when justification is provided and approved by the building official demonstrating that the water-resistive barrier is the only combustible material in the wall assembly and meets Exception 2 of Section 1402.5 of the 2021 and 2018 IBC and Exception 2 of Section 1403.5 of the 2015 IBC.

When installed in accordance with Section 1403.5 of the 2009 IBC, the panel system shall not be installed on walls equal to or greater than 40 feet (12192 mm) in height above the grade plane.

4.0 PRODUCT DESCRIPTION

4.1 General: The Swisspearl® Fiber-Cement Panel System consists of Swisspearl® Fiber-Cement Panels attached with visible fasteners to metal brackets, which are connected to aluminum or steel track. The Swisspearl Fiber-Cement Panel System has the following trade names; AFC Stone, AFC Groove, AFC Design, and AFC Blast, AFC Rustic. Figure 1 of this report illustrates typical bracket profiles and installation illustrations.

4.1.1 Swisspearl® Fiber-Cement Panels: Swisspearl® Fiber-Cement Panels comply with ASTM C1186 as Type A Grade IV fiber-cement boards, in accordance with Sections 1403.10 and 1404.16 of the 2021 and 2018 IBC, and Sections 1404.10 and 1405.16 of the 2015, 2012, and 2009 IBC, as applicable. The Swisspearl® Fiber-Cement Panels are nominally 8 mm (0.31 inch) thick, available in widths up to 1250 mm (49.2 inches) and lengths of 2500 mm (98 inches) and 3050 mm (120 inches). Swisspearl® Fiber-Cement Panels meet the requirements of a Class A interior finish, when tested in accordance with ASTM E84, in accordance with 2021 and 2018 IBC Section 803.1.2 or 2015 and 2012 IBC Section 803.1.1. The boards are classified as noncombustible when tested in accordance with ASTM E136.

4.1.2 Fasteners: Fasteners used with the Swisspearl® Fiber-Cement Panel Systems are shown in Table 2 of this report.



Where installed as exterior cladding, fasteners shall be corrosion-resistant.

Either IAPMO UES Mark of Conformity may also be used as shown below:

TABLE 2 – FASTENERS¹

Attachment	8-mm Panel Visible Attachment System
Hat-Channel to Framing	EJOT JT3-6-5.5 by 35 mm long E16 Self-drilling stainless steel screw
Z- Channel-to Horizontal Hat-Channel	EJOT JT4-6-5.5 by 22 mm long E16 Self-drilling stainless steel screw
Panel to vertical Z-channel	Rivets - Stainless steel 3/16-inch-diameter 4-by-19/K15 ¹

SI: 1-inch = 25 mm

¹ Provided with the Swisspearl® Fiber-Cement Panel System.

4.1.3 System and Profile Descriptions: Descriptions of the attachment systems elements are shown in Table 3 of this report. The 8-mm thick Swisspearl® panels use the Visible Attachment System. See Figure 1 of this report for typical profiles and installation illustrations.

TABLE 3 – ATTACHMENT SYSTEM ELEMENTS¹

Element	8-mm Panel Visible Attachment System ¹ (inch)
Z-Profiles	0.098 inch thick 0.882 inch deep with 1¼ inch long legs.
Hat-Channels	0.098 inch thick ½ inch deep with 1½ inch long legs with 1- inch long hat.

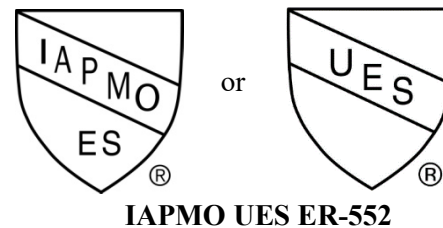
SI: 1 inch = 25.4 mm

¹ Provided with the Swisspearl® Fiber-Cement Panel System.

4.1.4 Metal Profiles: Metal framing shall be made of 6005a-T61 alloy extruded aluminum complying with ASTM B221, or better.

5.0 IDENTIFICATION

The Swisspearl® Fiber-Cement Panels shall be labeled with the manufacturer’s name and address, product trade name (AFC Stone, AFC Groove, AFC Design, and AFC Blast, AFC Rustic), thickness, color, finish, and batch number. The label shall identify the fiber-cement panels as conforming to the requirements of ASTM C1186, Type A, and the name of the approved inspection agency. The label shall include the IAPMO UES Evaluation Report Number (ER-552).



6.0 SUBSTANTIATING DATA

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Fiber-cement Siding (AC90), Approved October 2020, editorially revised December 2020.

6.2 Reports of non-combustibility testing in accordance with ASTM E136.

6.3 Reports of Surface Burning Characteristics testing in accordance with ASTM E84.

6.4 Test reports are from laboratories in compliance with ISO/IEC 17025.

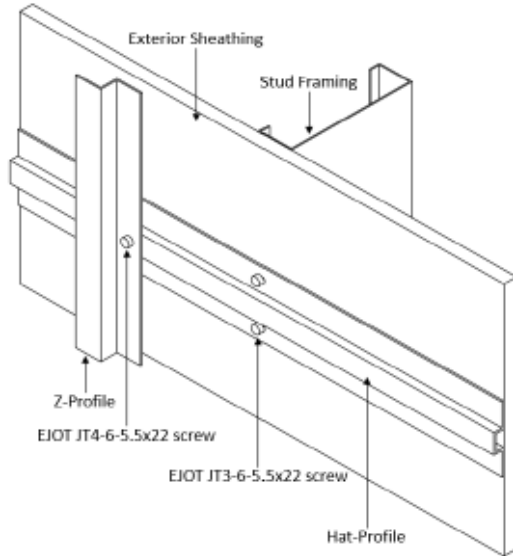
7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on the Swisspearl® Fiber-Cement Panel System manufactured in Nyergesujfaluy, Hungary, to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured under a quality control program with periodic inspection under the supervision of IAPMO UES.

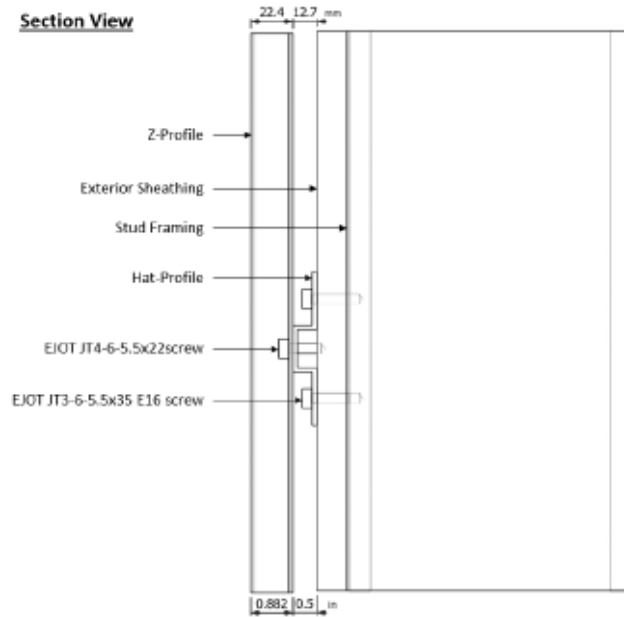
For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



Perspective View



Section View



Plan View

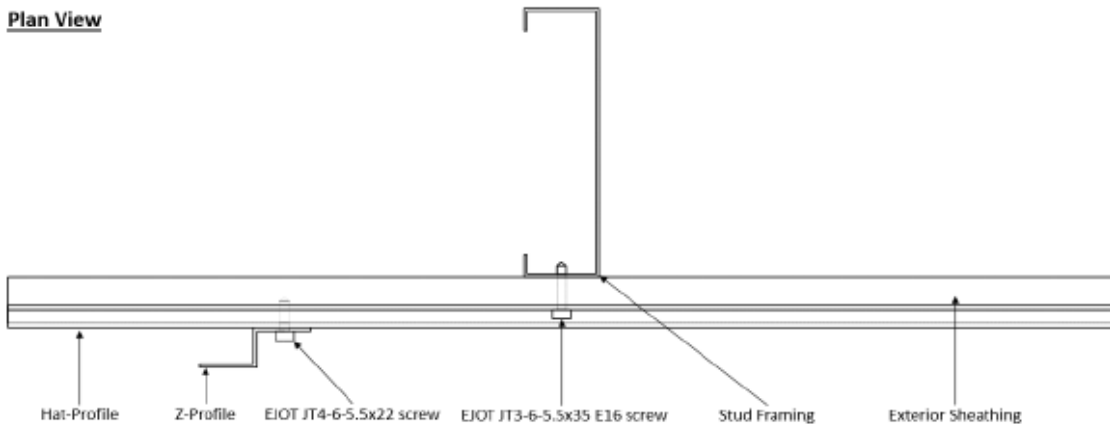


FIGURE 1
SWISSPEARL FIBER-CEMENT PANEL SYSTEM



CALIFORNIA SUPPLEMENT

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1.0 RECOGNITION

Swisspearl® Fiber-Cement Panel System described in this report has been evaluated for use as an exterior wall covering. The physical and durability, weather resistance, wind-load resistance, and non-combustibility of the panel system were evaluated for compliance with the following codes and regulations:

- 2022 California Building Code (CBC)
- 2022 California Residential Code (CRC)
- 2022 California Green Building Standards Code (CALGreen) / Title 24 Part 11

2.0 LIMITATIONS

Use of the Swisspearl® Fiber-Cement Panel System when installed and recognized in this report is subject to the limitations stated in Evaluation Report ER-552 and the following additional limitations:

2.1 The design, installation, limitations, and identification of the Swisspearl® Fiber-Cement Panel System shall be in accordance with the 2021 International Building Code or the 2021 International Residential Code, as applicable, as noted in ER-552.

2.2 The systems described in this report shall be used and installed in accordance with ER-552 and Chapters 8, 14, and 16 of the CBC, and Chapters 3 and 7 of the CRC, as applicable.

2.3 This supplement expires concurrently with ER-552.

3.0 USES

3.1 CALGreen: The Fiber-Cement panels conform to the Prefinished Material and Reduced Maintenance requirements as defined in CALGreen Appendix Section A4.405.1.3 and Section A5.406.1.2. The compliance and verification of these sections when the product is used is the responsibility of the user of this report and is outside the scope of this report.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



CITY OF LOS ANGELES SUPPLEMENT

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1.0 RECOGNITION

Swisspearl® Fiber-Cement Panel System as evaluated and presented in IAPMO UES Evaluation Report ER-552 and with changes as noted in the California supplement and this supplement is a satisfactory alternative for use in buildings built under the following codes (and regulations):

- 2023 City of Los Angeles Building Code (LABC)
- 2023 City of Los Angeles Residential Code (LARC)

2.0 LIMITATIONS

Use of the Swisspearl® Fiber-Cement Panel System when installed, designed, and recognized in this report is subject to the limitations stated in Evaluation Report ER-552 and the following additional limitations:

2.1 Drawings, design details, and calculations verifying the adequacy of the fastening to the supporting wall shall be submitted to the structural plan check section for each project for review and approval. The calculations shall be prepared, stamped, and signed by a California registered design professional.

2.2 The systems described in the report shall be used, designed, installed, and inspected in accordance with Chapters 8, 14, 16, and 17 of the LABC and Chapters 3 and 7 of the LARC, as applicable, due to local amendments to these chapters.

2.3 This supplement expires concurrently with ER-552.

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1.0 RECOGNITION

The Swisspearl® Fiber-Cement Panel System as evaluated and represented in IAPMO UES Evaluation Report ER-552 and with the changes noted in this supplement is a satisfactory alternative for use in buildings built under the following codes and regulations:

- 2023 Florida Building Code, Building (FBC, Building)
- 2023 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

Use of the Swisspearl® Fiber-Cement Panel System recognized in this report is subject to the following limitations:

2.1 Design requirements shall be determined in accordance with the FBC, Building and FBC, Residential, as applicable.

2.2 For installations in accordance with FBC, Building Section 1403.8, the Swisspearl® Fiber-Cement Panel System shall provide clearance between the panel and final earth grade on the exterior of a building of not less than 6 inches (152 mm) in order to provide for inspection for termite infestation, or in accordance with the Exceptions to Section 1403.8 of the FBC, Building, as applicable.

2.3 Use of the Swisspearl® Fiber-Cement Panel System for compliance with the High-Velocity Hurricane Zone provisions of the FBC, Building, and FBC, Residential has not been evaluated and is outside the scope of this evaluation report.

2.4 The design and installation of the Swisspearl® Fiber-Cement Panel System shall be in accordance with the 2021 International Building Code or the 2021 International Residential Code, as applicable, as noted in ER-552.

2.5 For products falling under Section (5)(d) of Florida Rule 61G20-3.001, verification that the report holder's quality assurance program is audited by a quality assurance entity, approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance.

2.6 This supplement expires concurrently with ER-552.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org