

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 42 43 – Composite Wall Panels

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REPORT SUBJECT:
TerraCORE Panels manufactured by ALLCOMB

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2015 and 2012 *International Building Code*® (IBC)

NOTE: This report references 2015 Code sections with [2012] Code sections shown in brackets where they differ.

1.2 The TerraCORE Panels manufactured by ALLCOMB have been evaluated for the following properties (see Table 1):

- Structural – wind resistance
- Weather resistance
- Durability
- Surface-burning Characteristics

1.3 The TerraCORE Panels manufactured by ALLCOMB have been evaluated for the following uses (see Table 1):

- Exterior wall cladding on Types I through V construction
- Interior Finish

2.0 STATEMENT OF COMPLIANCE

TerraCORE Panels manufactured by ALLCOMB comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 TerraCORE Panels manufactured by ALLCOMB:

TerraCORE Panels manufactured by ALLCOMB are nonload-bearing exterior wall cladding panels consisting of an aluminum honeycomb core with an interior facing of 1 mm aluminum and an exterior facing of stone, porcelain or aluminum. The panels are nominally 1-inch thick.

The panels have factory-attached clips on the interior face. The spacing of the clips will vary depending on the panel size but shall be no greater than 30 inches horizontally and vertically. Each panel shall have a minimum of four clips.

See Figures 1 through 4 for illustrations of the panel and attachment clips.

3.2 Extrusion Rails:

Extrusion rails are provided for attaching the panels to the structure. The extrusion rails must be 6063-T5 or -T6 aluminum alloy complying with ASTM B221. The rails are x inch thick and x inches wide. See Figure 2 for an illustration of the rails.



4.0 PERFORMANCE CHARACTERISTICS

4.1 Wind Resistance:

The panels, when installed in accordance with this report have an allowable transverse load resistance of 49 psf, positive and 29 psf negative.

Allowable negative wind load (29 psf) is governed by anchor clip capacity. Greater allowable negative wind pressure up to 49 psf maximum can be achieved with anchor spacing less than the maximum allowed spacing of 30 inches vertical and 30 inches horizontal. The maximum negative wind load per anchor clip shall not exceed 180 lbf.

4.2 Surface-burning Characteristics:

The panels have a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84.

5.0 INSTALLATION

5.1 General:

The panels must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

The panels are supplied to the jobsite with clips attached at the spacing determined by the designer but with spacing no greater than 30 inches horizontally or vertically. Attachment of the extrusion rails to the structure is determined by the designer for the applicable loads. Maximum deflection limit of the supporting wall construction is $L/240$.

Allowable wind loads apply to design loads derived from nominal wind speeds (V_{asd}).

A water-resistive barrier and flashing shall be installed in such a manner as to prevent the accumulation of water within the wall assembly, as required by IBC Section 1403.2. Joints between the panels must be sealed in accordance with the manufacturer's instructions.

For seismic design, attachment of the panels to the structure must be designed in accordance with Section 13.5.3 of ASCE 7.

5.2 Use on Exterior Walls of Types I, II, III or IV Construction:

When used on exterior walls of Types I, II, III or IV construction, walls must be as described in Intertek Design Listing TCP/CWP 30-01. Joints between panels must be sealed with H.B. Fuller Firesound sealant or Dow Corning 795 Silicone Building Sealant.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The design and attachment of the panels and extrusion rails are outside the scope of this report and must be justified to the satisfaction of the building official.

6.3 Use of the panels in fire-resistance-rated construction is outside the scope of this report and must be justified to the satisfaction of the building official.

6.4 The panels are manufactured in Guangdong, China, under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with NFPA 285

7.2 Data in accordance with applicable sections of the ICC-ES Acceptance Criteria for Sandwich Panels (AC04), dated February 2012, editorially revised July 2015.

7.3 Data in accordance with the ICC-ES Acceptance Criteria for Sandwich Panel Adhesives (AC05), dated June 2009, editorially revised July 2015.

7.4 Intertek Test Report 102738533SAT-003, dated December 12, 2016, on testing in accordance with NFPA 285.





7.5 Intertek Product Evaluation 103363463SAT-001, dated January 30, 2018, on use of Dow Corning 795 sealant.

7.6 Quality control documentation.

7.7 Intertek Listing Report "TerraCORE Panels manufactured by ALLCOMB", on the [Intertek Directory of Building Products](#).

8.0 IDENTIFICATION

The TerraCORE Panels manufactured by ALLCOMB are identified with the Report holder's name (TerraCORE Panels LLC), address and phone number; the product name; the project name; the panel code; the Intertek Mark; and the Code Compliance Research Report number (CCRR-1114).

9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

| PROPERTY | 2015 IBC SECTION | 2012 IBC Section |
|--|------------------|------------------|
| Structural - wind resistance | 1609 | 1609 |
| Weather resistance | 1403.2 | 1403.2 |
| Durability | 104.11 | 104.11 |
| Surface-burning characteristics | 803 | 803 |
| Use on exterior walls of Types I, II, III or IV construction | 1403.5 | 1403.5 |
| | | |



Figure 1 – Panel Clips



Figure 2 - Rails



Figure 3 – Panel Clips Engaging Rails

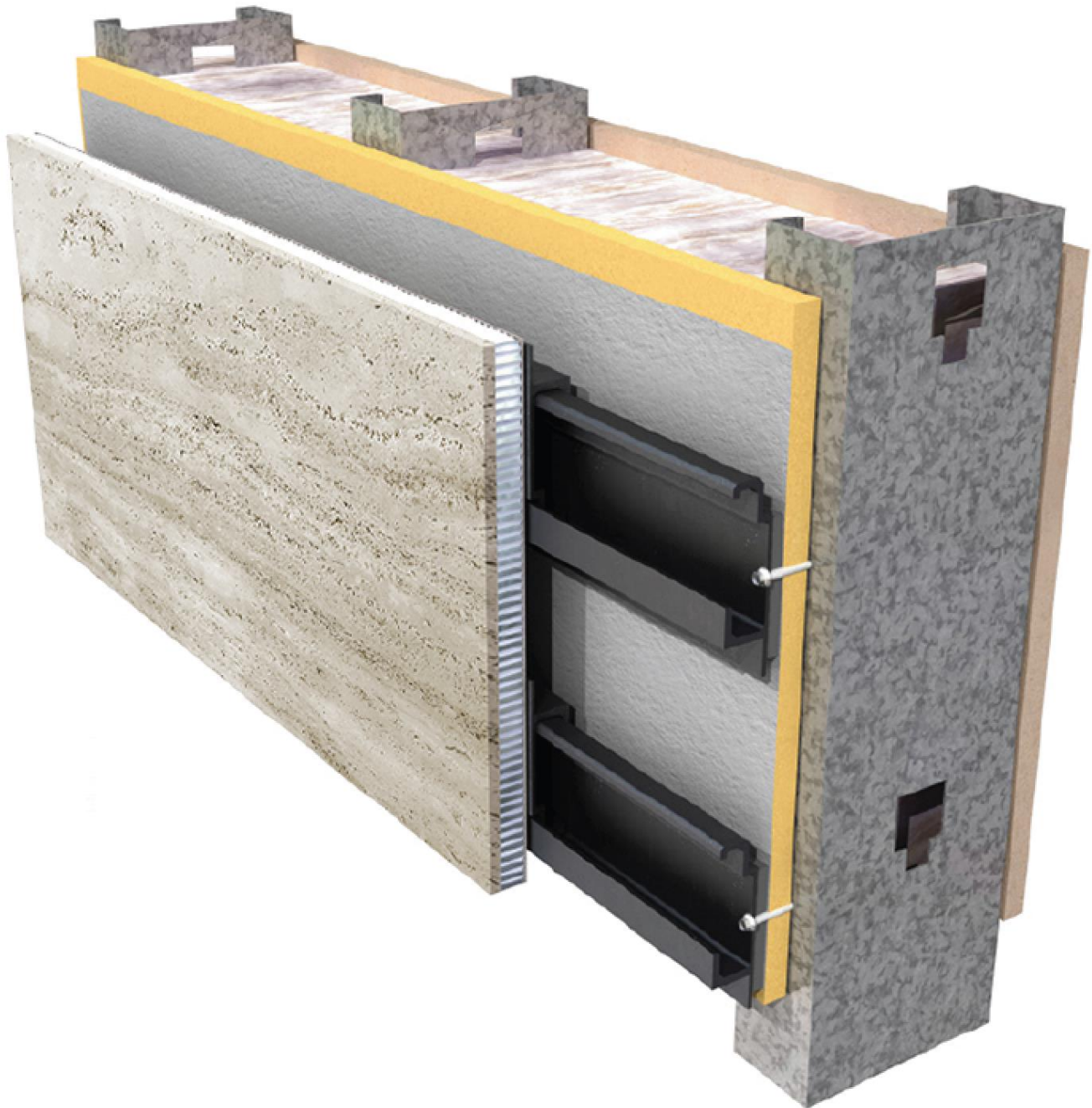


Figure 4 – Typical TerraCORE Panel Assembly



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