

**STRUCTURAL SHEAR PANEL  
SURE-BOARD™ SERIES 200 PANELS****PA-132**

Discipline: Structural

Issued 04-26-06

This Product Acceptance (PA) report indicates DSA's acceptance of a manufacturer's product and conditions for its use in projects under DSA jurisdiction, which include State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings.

A DSA PA report is issued on the basis of conformance with referenced code provisions, standards, product listings, and acceptance criteria. A DSA PA report is not mandatory. Products without a DSA PA report may be accepted for a specific project by a DSA regional office.

Product Acceptance reports are intended for use by project design professionals and DSA staff. DSA approval of any project using the specified product is contingent on incorporation, into the plans and specifications, of all applicable conditions of use. This product may be substituted for products specified in the DSA approved plans and specifications, provided that the project architect and/or structural engineer obtains DSA approval for all substitutions.

Acceptance of the product described below is granted contingent on continued acceptable performance, and can be revised or withdrawn at any time by DSA. Changes to the product specification and/or manufacturing procedures without DSA concurrence may void this Product Acceptance Report.

<b>PRODUCT NAME</b>	<b>Sure-Board™ Series 200 Structural Panels</b>	
<b>COMPANY NAME</b>	Intermat	
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<b>REFERENCES</b>	<p><b>Code:</b> 2001 Title 24, Part 2, Sections 1605A.4, 2220A.1 and 2220A.2</p> <p><b>Standards:</b> ICC AC154, March 2003; ICC AC130, February 2004</p> <p><b>Listing:</b> ICC ES Legacy Report ER-5762, reissued July 1, 2003</p>	

**Discussion:** Sure-Board™ Series 200 Structural Panel is fabricated by Intermat from 1/2-inch-thick or 5/8-inch-thick Type X gypsum board complying with ASTM C36-97, or Exterior Gypsum Sheathing having an exterior water-repellant paper and water-resistant treated core gypsum sheathing, complying with ASTM C79-97. Sheathing is laminated with a water soluble adhesive to sheet steel. The sheet steel is No. 22 gage (0.027-inch, 27 mil) base-metal thickness complying with ASTM A653 SS, Grade 33, and G40 hot-dipped galvanized coating conforming to ASTM A924. Panel is available in standard 48-inch width and lengths of 8, 9, and 10 feet. Typical panel and framing construction is shown in Appendix B.

Acceptance is based on DSA's review of the referenced Listing, test data, and quality control manual, for compliance with the Standards referenced above.

Continuous independent inspection for fabrication is not required. All quarterly quality control audit reports resulting from unannounced audits by a qualified independent inspection agency shall be maintained and made available to the Division of the State Architect upon request.

**1. Conditions of Use:** Sure-Board™ Series 200 Structural Panel may be specified for use on projects under DSA jurisdiction, subject to the conditions listed below:

**1.1** Use of Sure-Board™ Series 200 Structural Panel shall be limited to cold form steel frame construction. Steel framing members shall conform to Section 2.2.3 of the referenced Listing. Wall studs and tracks shall have a minimum uncoated base metal thickness of #20 gage or 0.84 mm and shall not have an uncoated base metal thickness greater than #16 gage or 1.37 mm.

**1.2** The following structural components that may be associated with a shear wall system are outside the scope of this PA, and must be designed in accordance with the California Building Code:

- Shear wall connections such as uplift holddown
- Foundations and supports
- Wall framing for out-of-plane and axial loads
- Chord splices, collectors, boundary members, etc.

**1.3** Sure-Board™ Series 200 Structural Panel may be installed on foundation or steel floor beams in upper stories. Installation must also be in accordance with Section 2.4 of the referenced Listing above.

**1.4** All panel edges shall be backed by framing or blocking. Shear walls more than one vertical panel in height shall have either vertical or horizontal staggered spliced joints. No panel less than 12 inches wide shall be used.

**1.5** Fasteners used for attaching the Sure-Board™ Series 200 structural panels are self-drilling/self tapping #6 bugle head screws complying with Section 2.2.2 of the referenced Listing above.

**1.6** Shear values for shear walls are limited to the values noted in Appendix A of this PA. These values are for short term wind or earthquake forces, and for  $R=4.5$ . Values can not be increased for panels attached to both sides of the wall.

**1.7** The maximum wall height-to-width ratio is 2-1/4 to 1, and all panel edges must be fully blocked.

**1.8** At openings, provide perimeter members that are detailed to distribute the shear stresses.

**1.9** Sure-Board™ Series 200 Structural Panel shall not be combined with other type of shear resisting elements in the same wall line without prior DSA approval.

**1.10** The panels are limited to applications where there is no direct exposure to the weather or damp environments for an extended period of time. Exterior panel must have treated core gypsum sheathing, and marked legibly on the face as treated core per ASTM C-79. Exterior panel shall also be protected with an impervious moisture barrier at the surface and all edges.

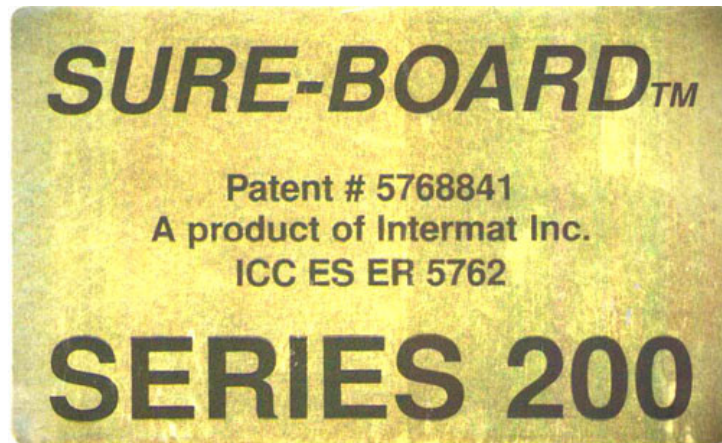
**1.11** Design of shear wall connections, such as holddowns, and shear transfer from horizontal elements is not part of PA-132 and shall comply with Title 24, Part II, California Building Code. Screw connections and splices shall comply with Title 24, Part II, Section 2220A.1.6. Boundary members and anchorages shall comply with Title 24, Part II, Section 2220A.2.

**1.12** Panels with damaged gypsum boards shall not be allowed without the approval of the project structural engineer and DSA. The project engineer shall show this requirement in the project specification or on structural plans.

**1.13** When used as exterior wall the Sure-Board™ Series 200 Structural Shear Panel and the associated wall openings shall be designed and constructed to resist safely the superimposed loads (e.g. out-of-plane wind loads) required by Chapter 16A of the CBC. Alternatively, the Sure-Board™ Series 200 Structural Shear Panel may be protected by exterior wall covering that is designed and constructed to resist safely these loads.

#### **IDENTIFICATION:**

The Sure-Board™ panels are identified per Section 2.5 of referenced Listing above. Each panel has a label bearing the name "Sure-Board™" located on the top right and bottom left hand corner on the metal facing, and similar to the samples shown below:



# Appendix A

## Shear Resistance to Wind or Earthquake and Deflections<sup>1</sup>

Framing Min. Gage	Fastener Edge Spacing	Nominal Values		LRFD Values		ASD Values	
		Load (plf)	Δ (inches)	Load (plf)	Δ (inches)	Load (plf)	Δ (inches)
20	2	1915	0.98	1035	0.31	740	0.18
	3	1730	0.97	940	0.31	670	0.19
	4	1545	1.07	870	0.38	620	0.19
	6	1085	0.74	610	0.20	435	0.13
18	2	2360	1.19	1320	0.35	944	0.23
	3	2145	1.23	1200	0.40	860	0.25
	4	1925	1.34	1080	0.40	770	0.23
	6	1400	0.98	785	0.31	560	0.18
16	2	3460	1.46	1750	0.46	1250	0.29
	3	2895	1.57	1625	0.44	1160	0.28

1) Deflection is based on tests for 9' high x 4' length panels

# Appendix B

## SURE-BOARD™ SERIES 200 PANELS

### Typical Panel and Framing Construction

