TABS II CERTIFIED TESTING

International Building Codes (I-Codes) effective January 1, 2005
Testing done by I-Code Certified Laboratories

ASTM C-297-99 SHEAR BOND STRENGTH TEST OF MASTIC

Objective: **Measure Tensile Bond Strength between thin brick and panel.**

Result: **After testing 4 (2"x 2") red tiles and 4 (2"x 2") tan tiles conforming to ASTM C1088 with Tabs II panel material bonded to one side. The following results were determined:**

Maximum Load	Average Bond Strength
786 lbf/in2	197 psi

Conclusion: **Based on the above test results it is determined that it will take over 1500 lbs of force to pull one modular thin brick from the Tabs II Panel. With Specified amount of adhesive per installation Guide, Panel meets the International Building Code Sec. 1405.9.1**

ASTM D 3498 MASTIC

Objective: **Test for strength, moisture resistance, gap-filling and oxidation resistance.**

Results: **150 Psi wet & dry Douglas-fur, 100 psi Gap-filling ¼" gap 100%, Moisture & Oxidation Resistance.**

Conclusion: **Moisture Resistance 100%- No Delaminating, Oxidation Resistance 100%- No signs of fractures when bent.**

ASTM C-1135 FREEZE-THAW TENSILE ADHESION PROPERTIES

Objective: **Test the adhesion properties after 100 freeze thaw cycles with Tabs panel and veneer.**

Results: **Tabs silicone adhesive tensile Strength 134 lbf/in2.**

Conclusion: **Tabs adhesive and panel can handle numerous freeze/thaw Cycles and remain well above code level of 50 lbf/in2.**

ASTM E-72 WINDLOAD TEST OF BUILDING PANELS

Objective: Determine wind load capacity of a composite TABS wall section based upon stud or girt spacing and deflection design of substrate.

DEFLECTION:

Summary of Test Results

Allowable panel load based on a deflection limit of:
L/360 = Allowable load of 416 kg/m2 (85.3 PSF) Negative load

Unless clearance has been obtained from TABS WALL SYSTEMS, per a Specific project, design deflection shall be based on L/360.

WIND SPEEDS

Objective: To determine the allowable wind load values for the Tabs II wall panels with brick based upon the testing information provided by Omega Point Laboratories test report (project number 16976-121616) dated 11/17/2004.

Result: For all walls of structures with no unusual geometrical irregularities in spatial form and normal wind response characteristics, the following height allowances were determined for the Tabs II Wall Panel with brick under 150 mph wind load conditions, for exposure categories B & C, the maximum allowable height was determined to be 500 feet (152.4 meters) above grade. The value is limited by maximum allowable height values in Table 6.3 in ASCE-7-2. For exposure category D, the maximum allowable height was determined to be 400 feet (121.9 meters) above grade.

Conclusion: Tabs II Wall Systems meet the requirements for use with commercial or residential mid-rise & high-rise applications.

ASTM E-119-00 FIRE RESISTANCE TEST

Objective: Determine the fire resistance of a wall system with TABS II for fire penetration that meets a 2-hour requirement.

Results: Temperature did not rise above prescribed levels and water hose test was met.

Conclusion: Fire Resistance testing has been certified and listed for TABS II wall assembly's by Omega Point Labs.

ASTM E-84-03 SURFACE BURN SPREAD & SMOKE DEVELOPMENT

Objective: Determine the Flame spread and smoke development of wall systems with TABS II

Results: The test results, computed on the basis of observed flame front advance and electronic smoke density measurements are as follows:

Test Specimen	Flame Spread Index	Smoke Developed
Mineral Fiber Cement Board	0	0
Red Oak Flooring	90	100
Brick Wall	0	0

Conclusion: Flame Spread Index = 0
Smoke Developed Index = 0

ASTM B-117-03 1000 HOUR SALT SPRAY TEST

Objective: Determine the corrosion resistance of the G90 Hot Dipped Galvanized Thermal Coated Support Panel when exposed to exterior weather conditions.

Results: The samples were exposed for 1000 hours, and rinsed after removal from the salt spray chamber. No staining or corrosion was observed after 24 hours of exposure.

Conclusion: Tabs II provides substantial protection on cut & punched edges for commercial & residential exterior weather conditions.

ASTM D1037-99 NAIL-HEAD PULL-THROUGH

Objective: Determine the amount of force needed to pull a fastener through the TABS II Panel.

Results: Average Nail-Head Pull-Through force 265 lbs Max Load

Conclusion: The fastener did not pull through the panel. The sheet metal bent.

ASTM E 2273-03 PER EG356-2006 WATER DRAINAGE

Objective: Standard test method of determining the drainage efficiency of cladded wall assemblies as modified per EG356.

Results: EG356 WATER DRAINAGE TEST RESULTS

(Wet Masonry) Percent Recovery 98.42%

Conclusion: The TABS II thin brick support panel described in the report had drainage efficiency of 98.4% when water absorption of the masonry veneer was near saturation levels. Thus, when eliminating the effect of the masonry water absorption, the sample under evaluation met the requirements of ASTM E 2273-03 Standard Test Method of Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies as Modified per EG356.

ICC-ES EG356 Section 3.1.6 Accelerated Weathering

Objective: Test a complete Tabs wall assembly for weathering effects.

Results: No change – Pass

Conclusion: The Tabs wall assembly is not affected by an accelerated weathering chamber for the prescribed period.

ASTM E96-05 ICC-ES EG356 Section 3.1.3 Water Vapor Transmission

Objective: **Test a complete Tabs wall assembly ability to block water-vapor transmission.**

Results: **Permeance 0.00 Perms.**

Conclusion: **A complete Tabs wall assembly is able to block all water vapor from reaching the interior of a building.**

ASTM C1338-02 ICC-ES EG356 Section 3.1.1 Fungi Resistance

Objective: **Testing the Tabs wall system for resistance to fungal growth.**

Results: **Less than 10% Growth on all 5 fungal types.**

Conclusion: **The Tabs Wall System Meets the acceptance criteria and does demonstrate the resistance of fungal contamination.**

ASTM D1761 LATERAL RESISTANCE TESTING ON WOOD, BRICK, AND 18-GAUGE STEEL SUBSTRATES

SCOPE OF WORK

Products: Wood, brick, and steel substrates at three different spacings
Intertek Building & Construction (B&C) was contracted by TABS Wall Systems, LLC to evaluate three spacings for three different substrates in accordance with ASTM D1761, Standard Test Methods for Mechanical Fasteners in Wood. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

All above testing is available in Long Form version upon request. All listed material has been tested to meet the requirements of the International Building Codes (I-Codes).