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The Subcommittee on Evaluation has reviewed the data submitted for compliance with the *Standard Building Code*®, the International One and Two Family Dwelling Code - 1998 Edition, and the Florida Building Code 2001 - Building and submits to the Building Official or other authority having jurisdiction the following report. The Subcommittee on Evaluation, ICC-ES and its staff are not responsible for any errors or omissions to any documents, calculations, drawings, specifications, tests or summaries prepared and submitted by the design professional or preparer of record that are listed in the Substantiating Data Section of this report.

REPORT NO.: 2325

EXPIRES: See the current EVALUATION REPORT INDEX

CATEGORY: FRAMING SYSTEMS

SUBMITTED BY:

TIMBERTECH LIMITED
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1. PRODUCT TRADE NAME

TimberTech® Decking:

- 1.1 T&G Planks
- 1.2 2x6 Boards

2. SCOPE OF EVALUATION

- 2.1 Structural
- 2.2 Weather Resistance
- 2.3 Fire Characteristics
- 2.4 Decay and Termite Resistance

3. USES

TimberTech® Decking is used as exterior decking on buildings of Type VI combustible construction.

4. DESCRIPTION

4.1 General

TimberTech® Decking is an extruded wood composite product, comprised of wood fibers and thermoplastic compound.

4.1.1 TimberTech® T&G Planks have a tongue and groove cross section and are 1-1/2 inches (38 mm) high by 6.794 inches (171 mm) wide with a 6 inch (152.4 mm) exposed surface area. The T&G planks are available in lengths of 12, 16 or 20 feet (3 658, 4 877, or 6 096 mm). An accessory decking starter strip is 1-1/2 inches high (38 mm), 1 inch wide (25.4 mm) in 12 foot (3 658 mm) lengths. The planks are screwed to wood joists for exterior deck applications.

4.1.2 TimberTech® 2x6 Boards are approximately 1.5 inches (38.1 mm) thick and 5.5 inch wide (139.7 mm).

TimberTEch® Decking T&G Plank and 2x6 Boards were tested for static coefficient of friction under ASTM D 2047 and demonstrated a coefficient of 0.55 in the dry condition and 0.88 in the wet condition.

4.2 Structural Testing

TimberTech® Decking was tested for structural design stress in flexure using control, elevated temperature and weathered samples. Uniform load tests were performed for both positive and negative load and stair tread concentrated loadings.

4.3 Weather Resistance

TimberTEch® Decking was tested for accelerated weathering under ASTM G 53 2000 hours, elevated temperature flexural strength, thermal expansion under ASTM D 696.

4.4 Fire Characteristics

TimberTech® Decking was tested under under ASTM E 84 and demonstrated a flame spread index (FSI) of 75 and a smoke density index (SDI) of less than 450.

4.5 Decay and Termite Resistance

TimberTech® Decking was tested for accelerated weathering under ASTM G 53 for 2000 hours, decay under ASTM D 1413 and termite resistance under AWPA Standard E1. TimberTech® Decking may be used as a alternative to preservative-treated or naturally durable lumber and may be used in direct contact with the ground.

4.6 Quality Assurance

Quality assurance is provided by RADCO listed with ICC-ES Legacy NES Report NER-QA204.

ICC-ES legacy reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, Inc., express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

5. INSTALLATION

5.1 General

TimberTech® Decking is installed in accordance with the manufacturer's published installation instructions and this report.

The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation. The instructions within this report govern if there are any conflicts between the manufacturer's instructions and this report.

5.2 Structural

5.2.1 TimberTech® T&G Decking planks are installed on exterior decks using two #8 x 2-1/2 inch long (63.5 mm) galvanized steel screws through the groove side of the T&G planks into wood joists spaced a maximum of 24 inches (609.6 mm) on center. The decking shall be continuous over a minimum of two joists to provide a minimum two span condition. A single span condition is not allowed. The maximum allowable transverse load is 100 psf (4.8 kPa) for live load and wind uplift load.

5.2.2 TimberTech® 2x6 Decking planks are installed on exterior decks using two #8 x 3 inch long (76.3 mm) galvanized steel screws through the planks into wood joists spaced a maximum of 24 inches (609.6 mm) on center. The decking shall be continuous over a minimum of two joists to provide a minimum two span condition. A single span condition is not allowed. The maximum allowable transverse load is 100 psf (4.8 kPa) for live load and wind uplift load.

5.2.3 Stair Treads: TimberTech Decking both T&G and 2x6 planks may be used for stair treads. When installed as stair treads, the T&G deck boards shall be supported at 12 inches (305 mm) o.c. attached to supports with two #8 x2-1/2 inch deck screws and the 2x6 planks shall be supported at 16 inches (406 mm) o.c. attached to supports with two #8 x 3 inch deck screws.

5.2.4 Design Loads on the decking shall be determined in accordance with Chapter 16 of *the Standard Building Code*®. Design loads determined in accordance with the Code shall not be increased for duration. Structural design calculations shall be submitted to the building official when applying for a permit. The calculations shall be signed, sealed, and dated by a registered professional engineer when required by the Code.

6. SUBSTANTIATING DATA

6.1 Manufacturer's descriptive literature, specifications, and installation instructions.

6.2 Test report physical properties, load testing and fire testing, RADCO Resources, Applications, Designs and Controls, Inc., RAD-3209, Project No. C-7892, Lab No. TL 1875, Issued April 2003, signed by Gregory Bohdan Nicholas Horeczko, and Michael L. Zieman.

The following testing was performed:

- Stair tread concentrated load.
- ASTM E 72, positive and negative loadings
- ASTM G 53, 2000 hours
- ASTM D 790, flexural strength, control, weathered and elevated temperature samples
- ASTM D 4226, impact -30° F

- ASTM D 696, coefficient of thermal expansion
- ASTM D 2047, static coefficient of friction
- ASTM D 1413, decay resistance
- AWWA E 1, termite resistance
- ASTM D 1037, water absorption
- ASTM E 84, surface burning characteristics
- ASTM D 198, flexural bending strength.

6.3 Engineering calculations, TimberTech 2x6 and T&G deck board span table, RADCO, April 21, 2003, signed and sealed by Fred T. Katakura, P.E.

6.4 Quality Control Manual for TimberTech® Decking, RADCO (ICC-ES Legacy NER-QA204, IAS AA-650), Issued October 1999, Revised October 2003, signed by Michael L. Zieman, P.E., of RADCO, and Stu Kemper, President of TimberTech Limited.

7. CODE REFERENCES

Standard Building Code® - 1999 Edition

Section 103.7	Alternate Materials and Methods
Chapter 16	Structural Loads
Section 104	Live Loads
Table 1604.1	Minimum Uniformly Distributed Live Loads
Section 1606	Wind Loads
Section 1610	Deflection
Section 2304	Protection Against Decay and Termites
Section 2306	Fastenings
Section 2307	Floor Framing

International One and Two Family Dwelling Code - 1998 Edition

Section 108	Alternate Materials and Systems
Section 301	Design Criteria
Section 322	Protection Against Decay
Section 323	Protection Against Termites
Figure 301.2(6)	Termite Infestation Probability Map
Figure 301.2(7)	Decay Probability Map
Chapter 5	Floors
Section 502	Wood Floor Framing

Florida Building Code 2001 - Building

Section 103.7	Alternate Materials and Methods
Chapter 16	Structural Loads
Section 104	Live Loads
Table 1604.1	Minimum Uniformly Distributed Live Loads
Section 1606	Wind Loads
Section 1610	Deflection
Section 2304	Protection Against Decay and Termites
Section 2306	Fastenings
Section 2307	Floor Framing

8. COMMITTEE FINDINGS

The Subcommittee on Evaluation in review of the data submitted finds that, in their opinion, the TimberTech® Decking T&G Plank and 2x6 Boards as described in this report conform with or are suitable alternates to that specified in the *Standard Building Code*®, the International One and Two Family Dwelling Code, and the Florida Building Code 2001 - Building or Supplements thereto.

9. LIMITATIONS

- 9.1 This Legacy Evaluation Report and the installation instructions, when required by the code official, shall be submitted at the time of permit application.
- 9.2 TimberTech® Decking shall only be used for exterior decking on buildings of Type VI combustible construction. The maximum span between joist shall be 24 inches (609.6 mm).
- 9.3 Structural design for TimberTech® Decking shall be in accordance with section 5.2 above.
- 9.4 TimberTech® Decking shall not be used as component of Type III heavy timber construction.

10. IDENTIFICATION

Each package of TimberTech® Decking T&G Plank and 2x6 Boards and accessories covered by this report shall be labeled with the manufacturer's name and/or trademark, the SBCCI Public Safety Testing and Evaluation Services Inc. Seal or initials (SBCCI PST & ESI), and the number of this report for field identification.

11. PERIOD OF ISSUANCE

SEE THE CURRENT EVALUATION REPORT INDEX FOR STATUS OF THIS LEGACY EVALUATION REPORT.

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