1. Identification

Product Identifier: ChoiceDek® Decking and Accessories
Wood-Polymer Composite Lumber Product

Recommended Use: As a non-structural construction material primarily for exterior surface applications, including decks, docks, walkways, and various exterior flooring uses.

Manufacturer: Advanced Environmental Recycling Technologies, Inc.

Location: 914 North Jefferson
Springdale, Arkansas 72764

Postal: P.O. Box 1237
Springdale, Arkansas 72765

Phone: 800-951-5117
Fax: 479-756-7410
Emergency: 800-951-5117

2. Hazard Identification

Classification of the Substance or Mixture:

Signal Word: Warning

This manufactured product is classified as an “Article as defined under OSHA 1910.1200(c) and is therefore exempt from the SDS requirement.

Processing dust and decomposition emissions and products are addressed by this document. Wood, colorant, stabilizers, and processing aids are encapsulated in a polymer matrix yielding the product ill-suited for dust formation. Hazardous emissions such as carbon dioxide, carbon monoxide, water vapor, methane, and other hydrocarbons, and hydrocarbon oxidation products may be produced by burning the product under ambient conditions. Open burning is prohibited in most jurisdictions. The product does not release significant amounts of hazardous chemicals under normal conditions.
Safety Data Sheet (SDS)

GHS07

Signal Word: Irritant

Dust can be generated and become airborne during mechanical processing by means of sawing, sanding, milling, or similar actions. Processing that produces dust should be conducted in well ventilated areas. Exposure to certain wood dusts can produce irritation in the eyes, nose, and respiratory tract. Repeated exposures can produce or worsen allergic skin and respiratory reactions including asthma and rhinitis.

Hazardous decomposition products may be emitted under conditions of sub-stoichiometric or ambient air combustion. Decomposition products may become an irritant to nasal passages, lungs and throat.

Precautionary Statement: Use gloves, sleeves, eye protection, and dust mask as appropriate to prevent skin, eye, and respiratory irritation from mechanical and dust hazards when working the article.

Dispose of scrap or unused material in accordance with local, state, and national regulations.

Classification System: NFPA/HMIS Definitions: 0-Least, 2-Moderate, 3-High, 4-Extreme

NFPA Ratings (Scale 0-4)

HMIS Ratings (Scale 0-4)
3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS#</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Dust</td>
<td>Wood Dust</td>
<td>NA</td>
<td>45-55%</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>9002-88-4</td>
<td>43-47%</td>
</tr>
<tr>
<td>Pigment</td>
<td>Colorant</td>
<td>NA</td>
<td>1.5-3%</td>
</tr>
<tr>
<td>Zinc Borate</td>
<td>Zinc Borate</td>
<td>138265-88-0</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Product is a matrix of polyethylene with other ingredients contained or encapsulated within the matrix. Primary ingredients are recycled wood and recycled polyethylene with additives for process, color, an environmental stability.

4. First Aid Measures

**Eyes:** Flush thoroughly with water. If irritation occurs call a physician.

**Skin:** Wash contact area with soap and water.

**Inhalation:** If respiratory irritation, cough, or wheezing occurs after exposure to dust, or combustion decomposition products, discontinue exposure, and seek medical assistance.

**Ingestion:** No adverse effects anticipated by this route of exposure. If ingestion causes discomfort, seek medical assistance.

5. Fire Fighting Measures

**Extinguishing Media:** Water, water fog, foam, carbon dioxide or dry chemical on residual fires.

**Special Procedures:** Fire fighters should use water to cool exposed material.

**Protective Equipment:** Self-contained breathing apparatus should be worn for fires that are enclosed. The exact nature of decomposition products will depend upon exposure conditions including temperature, availability of oxygen and presence of other materials. Decomposition products can include carbon dioxide, carbon monoxide, water vapor, methane and other hydrocarbons, and hydrocarbon oxidation products. Fire fighters should wear self-contained breathing apparatus if there is a risk of exposure to
gaseous products of combustion. Use water spray, water fog, foam, carbon dioxide or dry chemical powder on residual fires.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Individuals processing material using saws, mills, sanders, or other carpentry or milling equipment should wear eye protection and dust masks.

Notification Procedures: None

Environmental Precautions: Dust from sawing or milling or residual material from combustion may present release problems that should be addressed. Dust should be swept or vacuumed and disposed as regular solid waste. Water from fire-fighting operations and stormwater exposed to dust or combusted residual material should be processed through normal stormwater controls before release.

Methods and Materials for Containment and Cleanup: Solid product spilled should be collected and restacked or removed using normal material handling procedures. Personnel cleaning and recovering dust produced from sawing or milling should wear eye protection, dust masks, and gloves. Dust can be swept or vacuumed and stored in a regular non-porous solid waste container of appropriate size. Recovered material can be disposed as regular solid waste.

7. Handling and Storage

Precautions for Safe Handling: ChoiceDek® Decking and Accessories is not intended for use in load bearing or heavy structural applications. ChoiceDek® Decking and Accessories is heavier than similar wood products and care should be taken to accommodate the extra weight.

Precaution should be taken to properly handle the material to prevent injury.

Do not burn in fireplace or heating systems not specifically designed to combust wood and polyethylene mixtures. Do not store near strong oxidizing agents or combustible material.

Wash hands after handling and use.

Conditions for Safe Storage: Product will burn if exposed to fire or excessive heat. Avoid storing in areas where product will be exposed to flames, sparks, or excessive heat.

Product is designed to fade in exposed ambient conditions that include direct or indirect sunlight. Keep product covered or in packaging until used to prevent premature or uneven fading.
8. Exposure Control and Personal Protection

Control Parameters

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS No.</th>
<th>OSHA PEL mg/m3</th>
<th>OSHA STEL mg/m3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Dust (Hardwood)</td>
<td>NA</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>3.5</td>
<td>N/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS No.</th>
<th>OSHA PEL mg/m3</th>
<th>OSHA PEL mg/m3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Borate (Particulate not otherwise regulated)</td>
<td>138265-88-0</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

STEL – Short Term Exposure Limit
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
TLV – Threshold Limit Value
TWA – Time Weighted Average (8 Hr. unless otherwise noted)

Appropriate Engineering Controls

- **Ventilation:** Cut and mill in well ventilated area. Maintain air concentrations below occupational exposure standards using engineering controls if necessary.

- **Respiratory Protection:** Approved dust respirators must be used if breathing dust is likely.

- **Eye Protection:** Safety glasses with side shields, or goggles should be worn during dusty conditions.

- **Skin Protection:** No special equipment is required. Gloves can be worn to protect hands from normal contact related abrasions. Good personal hygiene, including washing hands after contact, should be followed.
9. Physical Data

Appearance: Solid linear profiles colored gray, brown, and redwood
Odor: None
Odor Threshold: Not Established
pH: Not Applicable
Melting Point: 115 to 135°C / 239 to 275°F
Boiling Point: Not Applicable
Flash Point: > 572°F
Evaporation Rate: Not Applicable
Flammable: No
Combustible (solid): Yes
Upper/Lower Flammability: Not Applicable
Vapor Pressure: Not Applicable
Vapor Density: Not Applicable
Relative Density: .97 g/cm
Solubility in Water: Negligible
Partition Coefficient: Not Established
Auto-ignition Temperature: 343°C / 650°F (estimate)
Decomposition Temperature: 290°C / 554°F (thermal degradation/ICAC 1400)
Viscosity at 100°C: NA

Product is a mixture of recycled polyethylene and recycled wood with pigment. Mixture normally contains from 43 to 47% polyethylene with 45 to 55% wood fiber.

10. Stability and Reactivity

Reactive: Non-reactive
Chemical Stability: Product is stable under normal conditions
Hazardous Reactions: No hazardous reactions under normal conditions
Conditions to Avoid: Avoid open flames and excessive heat
Incompatible Materials: Avoid strong oxidizers
Hazardous Decomposition Products: Combustion under ambient and sub-stoichiometric conditions will produce smoke, carbon monoxide, acetaldehyde, formaldehyde, formic acid, acetic acid, other hydrocarbon oxidation products, and particulate. Hazardous polymerization will not occur.
11. Toxicological Information

**Acute Toxicity:** Oral toxicity LD50 not established. Oral exposure is not a likely route for toxicity.

**Skin Corrosion/Irritation:** Skin irritation may result from mechanical abrasion during exposure to dust.

**Skin Sensitization:** Not established

**Serious Eye Damage/Irritation:** Dust can cause eye irritation.

**Respiratory Sensitization:** Not established

**Germ Cell Mutagenicity:** Not established

**Carcinogenicity:** Based on available evidence, IARC has determined that wood dust is a human carcinogen when inhaled. IARC has also determined that there is sufficient evidence to classify carbon black as a suspected human carcinogen when inhaled based on animal studies. Exposure to both wood fiber and carbon black is virtually eliminated when they are incorporated into a matrix of plastic in the finished product.

**Reproductive Toxicity:** Not Established

**STOT – Single Exposure:** Not Established

**STOT – Repeated Exposure:** Not Established

**Aspiration Hazard:** Dust from cutting or milling product can cause lung and throat irritation. Aspiration is only a hazard when cutting, milling, or otherwise generating dust from the product.

**Likely Routes of Exposure:** Exposure to mechanically generated dust, or to smoke generated from burning can cause skin, eye, and nasal or respiratory irritation. These are the most likely routes for harmful exposure.

**Symptoms:** Exposure to dust may cause or contribute to temporary skin or eye irritation. Exposure to smoke generated from burning product can cause headaches and dizziness. Remove from smoke area and administer fresh air.

Immediate effects of exposure to dust can include eye irritation and nasal or respiratory irritation. No long term effects of exposure to product or dust from product are known. Incorporating wood dust and carbon black into a polymer matrix greatly reduces the identified exposure pathway to these materials.
Mixture Ingredient Chronic Toxicology

Wood Dust: Based on available evidence, IARC has determined that wood dust causes cancer of the nasal cavity and paranasal sinuses and of the nasopharynx.  

<table>
<thead>
<tr>
<th>Wood Dust</th>
<th>mg/m³</th>
<th>Interpretation</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC (mono100C-15)</td>
<td>15</td>
<td>Human Carcinogen</td>
<td>Group 1</td>
</tr>
<tr>
<td>NIOSH (total)</td>
<td>15</td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td>NIOSH (resp.)</td>
<td>5</td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td>OSHA (PEL)</td>
<td>15</td>
<td>STEL – 15 Min.</td>
<td></td>
</tr>
<tr>
<td>OSHA (PEL)</td>
<td>5</td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td>Alberta (8 Hr. OEL)</td>
<td>5</td>
<td>Total Fraction</td>
<td></td>
</tr>
<tr>
<td>ACGIH (PEL)</td>
<td>1</td>
<td>Inhalable Fraction</td>
<td></td>
</tr>
<tr>
<td>Canada Labour Code</td>
<td>1</td>
<td>OEL</td>
<td></td>
</tr>
</tbody>
</table>

Carbon Black: IARC has determined that there is sufficient evidence to classify carbon black as possibly carcinogenic to humans when inhaled based on animal studies.

<table>
<thead>
<tr>
<th>Carbon Black</th>
<th>mg/m³</th>
<th>Interpretation</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH (TLV)</td>
<td>3.5</td>
<td>TWA</td>
<td>Group A4</td>
</tr>
<tr>
<td>NIOSH (REL)</td>
<td>3.5</td>
<td>10-h TWA</td>
<td></td>
</tr>
<tr>
<td>OSHA (PEL)</td>
<td>3.5</td>
<td>TWQ</td>
<td></td>
</tr>
<tr>
<td>IARC</td>
<td></td>
<td>Possible Human Carcinogen</td>
<td>Group 2B</td>
</tr>
<tr>
<td>Cal. OSHA</td>
<td>3.5</td>
<td>TWA</td>
<td></td>
</tr>
</tbody>
</table>

Zinc Borate: OSHA has published permissible exposure limits for total dust and respirable dust that are applicable to zinc borate.

<table>
<thead>
<tr>
<th>Zinc Borate</th>
<th>mg/m³</th>
<th>Interpretation</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>15</td>
<td>PEL (Total Dust)</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>5</td>
<td>PEL (Respirable Dust)</td>
<td></td>
</tr>
</tbody>
</table>

1. IARC Monograph 100C-15, Wood Dust
2. IARC Monograph 93-6, Carbon Black

Product is a matrix of polyethylene with other ingredients contained or encapsulated within the polyethylene matrix. Due to the structure of the polyethylene matrix, the material is not well suited to create small dust particles when sawn or milled.
12. Ecological Information

Ecotoxicity: This material may obstruct digestive tracts of birds or wildlife if particles created by cutting or milling near construction sites are eaten. However, the material should not be toxic to such animals. This material is not expected to leach zinc borate which can be toxic to fish, aquatic plants, and invertebrate protozoan.

Bioaccumulative: This material is not bioaccumulative.

Mobility in Soil: This material is not mobile in soil.

Environmental Fate: This material is not expected to be readily biodegradable.

13. Disposal Information

Waste Disposal: Dispose of waste as normal solid waste in accordance with local, state, and national regulations.

Recycling: The product is recyclable by the manufacturer if returned to the manufacture. Packaging material including plastic sheeting, plastic corners, strapping, wood, and corrugated material are all recyclable if a local recycling/recovery programs exists that accept those materials.

RCRA: Unused product is not listed by U.S. EPA as a hazardous waste (40 CFR part 261 D) nor is it formulated with materials that are listed as hazardous waste. Product does not exhibit the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity.

14. Transportation Information

UN Number: Not a dangerous good.

UN Proper Shipping Name: Not a dangerous good.

Transport Hazard Class(es): Not a dangerous good.

Packing Group: Not a dangerous good.

Environmental Hazard: Not a known marine pollutant or dangerous good.

Special Precaution for User: Not a dangerous good.

Transport in Bulk/Annex II of MARPOL 7378 and IBC Code: Not a dangerous good.
15. Regulatory Information

Montreal Protocol: Not subject to the Montreal Protocol. ³
Stockholm Convention: Not subject to the Stockholm Convention. ⁴
Rotterdam Convention: Not subject to the Rotterdam Convention. ⁵
TSCA: All component chemicals are TSCA compliant.
RCRA (C): Not regulated
CERCLA: Not regulated
SARA Title III This product contains no extremely hazardous chemicals
SARA Title III, Section 313 Zinc Borate is regulated as a Form R reportable chemical under the category “zinc compounds”.

3. Montreal Protocol on Substances that Deplete the Ozone Layer
5. Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals

16. Other Information

This Safety Data Sheet (SDS) has been prepared to replace the previously used Material Safety Data Sheet. This SDS has been constructed to comply with the Global Harmonized System of Classification and Labeling Chemicals, Third Revised Edition adopted in 2009.

This SDS has been prepared on the basis of information provided by our suppliers and others that we feel are reliable. To the best of our knowledge, the information, data, and recommendations contained herein is accurate and is provided in good faith. However, A.E.R.T., Inc. (Advanced Environmental Recycling Technologies, Inc.) makes no representation regarding the comprehensiveness of the information and consequently assumes no liability whatsoever for the information contained herein. This SDS shall be used only as a guide for handling the product. In the course of using or handling the product other considerations may arise. The conditions related to using, handling, storing, and disposing of the product are beyond the control of the manufacturer. Therefore, no warranty, expressed or implied, shall be created or inferred by any statement in this SDS. No responsibility is assumed regarding the accuracy, completeness, or suitability of the information contained herein or the results obtained from its use. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Nothing contained herein is intended as a recommendation for uses that may infringe patents or other protected rights. Appropriate instructions for use including safe handling procedures should be provided to all handlers and users. The user should fully comply with local, state, national, and international regulations concerning the use of this product.

Always use the most current version of this document available from AERT, Inc. at the contact information supplied above.
DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
SECTION: 06 53 00—PLASTIC DECKING
SECTION: 06 63 00—PLASTIC RAILINGS

REPORT HOLDER:
ADVANCED ENVIRONMENTAL RECYCLING TECHNOLOGIES, INC.
914 NORTH JEFFERSON STREET
SPRINGDALE, ARKANSAS 72764

EVALUATION SUBJECT:
CHOICEDEK®, CHOICEDEK® FR, CHOICEDEK® FOUNDATIONS, MOISTURESHEILD®, MOISTURESHEILD® FR,
MOISTURESHEILD® ELITE COLLECTION®, MOISTURESHEILD® VANTAGE COLLECTION®, MOISTURESHEILD® VANTAGE
COLLECTION® FR, MOISTURESHEILD® ESSENTIAL COLLECTION®, MOISTURESHEILD® MODERNVIEW™,
MOISTURESHEILD PRO, LIFECYCLE® AND LIFECYCLE® BASICS DECKING; CHOICEDEK®, MOISTURESHEILD® AND
LIFECYCLE® BASICS GUARDRAIL SYSTEMS

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 53 00—Plastic Decking
Section: 06 63 00—Plastic Railings

REPORT HOLDER:
ADVANCED ENVIRONMENTAL RECYCLING TECHNOLOGIES, INC. (A.E.R.T.)
914 NORTH JEFFERSON STREET
SPRINGDALE, ARKANSAS 72764
(479) 756-7400
www.aert.com

EVALUATION SUBJECT:
CHOICEDEK®, CHOICEDEK® FR, CHOICEDEK® FOUNDATIONS
MOISTURESHIELD®, MOISTURESHIELD® FR, MOISTURESHIELD® ELITE COLLECTION®, MOISTURESHIELD® VANTAGE COLLECTION®, MOISTURESHIELD® VANTAGE COLLECTION® FR, MOISTURESHIELD® ESSENTIAL COLLECTION®, MOISTURESHIELD® MODERNVIEW™, MOISTURESHIELD® PRO, LIFECYCLE® AND LIFECYCLE® BASICS DECKING
CHOICEDEK®, MOISTURESHIELD® AND LIFECYCLE® BASICS GUARDRAIL SYSTEMS

1.0 EVALUATION SCOPE
Compliance with the following codes:
- 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)†
  †The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.
- Other Codes (see Section 8.0)

Properties evaluated:
- Structural
- Durability
- Surface-burning characteristics

2.0 USES
ChoiceDek, ChoiceDek FR, ChoiceDek Foundations, MoistureShield, MoistureShield FR, MoistureShield Essential Collection, MoistureShield Elite Collection, MoistureShield Vantage Collection, MoistureShield Vantage Collection FR, MoistureShield ModernView, MoistureShield Pro, Lifecycle and Lifecycle Basics deck boards are limited to use as flooring for exterior balconies, porches, decks and stair treads. The ChoiceDek, MoistureShield and Lifecycle Basics guardrail systems described in this report are limited to exterior use as guards for balconies, porches, and decks. The products described in this report are used in exterior applications in any occupancy group in buildings of Type V-B (IBC) construction or in buildings constructed in accordance with the IRC. The guards may be used in other types of construction in applications where untreated wood is permitted by IBC Section 1406.3.

3.0 DESCRIPTION
3.1 General:
ChoiceDek FR, ChoiceDek Foundations, MoistureShield, MoistureShield FR, MoistureShield Essential Collection, MoistureShield Elite Collection, MoistureShield Vantage Collection, MoistureShield Vantage Collection FR, MoistureShield ModernView and Lifecycle Basics are wood thermoplastic composite lumber (WTCL) products manufactured in a continuous extrusion process in accordance with the approved quality control manual.

MoistureShield Pro and Lifecycle are WTCL products produced in a coextrusion process with a cap covering three sides of the deck board in accordance with the approved quality control manual. ChoiceDek deck boards are available as both a capped and uncapped product.

The products are available in comparable lumber-sized members (see Figures 2 through 14) and are available in ten colors (Redwood, Gray, Dark Cherry, Earhtone, Cape Cod Gray, Seasoned Mahogany, Rustic Cedar, Woodtone, Sandstone and Classic), with the exception of the FR and capped deck board products. ChoiceDek FR, MoistureShield FR and MoistureShield Vantage collection FR are available in the colors of Earhtone, Cape Cod Gray, Seasoned Mahogany and Redwood and the capped deck boards are available in the colors of Graystone, Ipe and Brazilian Chestnut. ChoiceDek, MoistureShield and Lifecycle Basics guardrail assembly components must be supported by structural framing in accordance with applicable code requirements.

3.2 Deck Board:
3.2.1 ChoiceDek, ChoiceDek FR, ChoiceDek Foundations, MoistureShield, MoistureShield FR, MoistureShield Essential Collection, MoistureShield Elite Collection, MoistureShield Vantage Collection, MoistureShield ModernView, MoistureShield Pro and Lifecycle Basics Deck Boards (Also Used as Stair Treads): The decking is fastened to supporting construction as
described in Section 4.2.4. The decking is installed over supporting construction such as wood joist framing members in accordance with Table 1. Additional installation instructions provided by the manufacturer are required per Section 4.3.

3.2.2 Durability: When subjected to weathering, insect attack including Formosan termites, and other decaying elements, material used to manufacture the deck boards are equivalent in durability to preservative-treated or naturally durable lumber when used in locations described in Section 2.0. The deck boards have been evaluated for a temperature range from -20°F to 125°F (-29°C to 52°C).

3.2.3 Surface-burning Characteristics: When tested in accordance with ASTM E84, the deck boards have a flame-spread index no greater than 200.

3.3 Guardrail:

3.3.1 ChoiceDek, MoistureShield and Lifecycle Basics

Guardrail Assembly: The guardrail assemblies are 42 inches (1067 mm) or 36 inches (914 mm) high and 64 inches (1626 mm) or 72 inches (1829 mm) long, and are installed in three configurations, System No.1, System No. 2 and System No. 3. System No. 1, System No. 2 and System No. 3 must be constructed in accordance with Table 3. Each system consists of a top guardrail, bottom guardrail, balusters and post. See Figures 1 through 3 for details of System No. 1, System No. 2 and System No. 3. The posts are designed to be installed with or without a reinforcing pipe. The reinforcing pipe is an ASTM A53, Grade A material that is nominally 1 1/4 inches in diameter, and are installed in accordance with Section 2.0. The guardrails have been evaluated for a temperature range from -20°F to 125°F (-29°C to 52°C).

3.3.2 Durability: When subjected to weathering, insect attack including Formosan termites, and other decaying elements, material used to manufacture the guardrails are equivalent in durability to preservative-treated or naturally durable lumber when used in locations described in Section 2.0. The guardrails have been evaluated for a temperature range from -20°F to 125°F (-29°C to 52°C).

3.3.3 Surface-burning Characteristics: When tested in accordance with ASTM E84, the guardrails have a flame-spread index no greater than 200.

4.0 DESIGN AND INSTALLATION

4.1 General:

Installation of the decking and guardrail assemblies, must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report governs.

4.2 Design:

4.2.1 Deck Boards: The deck boards have an allowable capacity when installed at a maximum center-to-center spacing of the supporting construction as prescribed in Table 1.

4.2.2 Stair Treads: Deck boards installed as stair treads are capable of resisting the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum center-to-center spacing of the supporting construction as shown in Table 2.

4.2.3 Guardrail: When installed in accordance with this report, the guardrail assemblies comply with the structural load requirements specified in Section 1607.8.1 of the 2012 IBC, and Section 1607.7.1 of the 2009 and 2006 IBC and Table R301.5 of the IRC.

4.2.4 Fasteners: The deck boards have been tested for wind uplift and have an uplift rating of 35 psf (1676 Pa) when installed with 16d casing nails, 8d box nails or No. 7 wood screws through the board, or with Phantom and InvisiFast hidden fasteners in the grooved boards.

4.3 Installation:

4.3.1 Deck Boards and Deck Boards Used as Stair Treads: The decking must be installed perpendicular to the supporting construction, which must be limited to a maximum spacing as prescribed in Tables 1 and 2. The decking must be installed with a minimum gap of 1/16 inch (5 mm) between parallel boards, to permit adequate drainage, and a minimum 1/16-inch (3 mm) space must be provided at each end in accordance with the manufacturer's published installation instructions. The ends of the boards must come together over a double joist to provide adequate support and embedment of fasteners. The decking must not be attached to any solid surface or watertight flooring system, such as sheathing, waterproof membrane, concrete, roof deck or patio.

4.3.2 Guardrail: The guardrail assemblies can be installed in two configurations, as described in Section 3.3.1. The 64-inch-long (1626 mm) assemblies, which may be either 36 inches (914 mm) or 42 inches (1067 mm) high, and the 72-inch-long (1829 mm) assembly, which are both 36 inches (914 mm) high, do not require post reinforcement. The 72-inch-long (1829 mm) assembly that is 42 inches (1067 mm) high, requires post reinforcement. When the guardrails are fastened to posts or to a structure other than the posts described in this report, they must be designed and installed in accordance with the applicable code. The 64-inch and 72-inch (1626 mm and 1829 mm) assemblies are measured from center-of-post to center-of-post.

5.0 CONDITIONS OF USE

The decking and guardrail assemblies, as described in this report, comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 These products are limited to exterior uses as deck boards and guards for balconies, porches, decks and stair treads and similar appendages of any occupancy group of Type V-B (IBC) construction and structures constructed in accordance with the IRC. The guards may be used in other types of construction in applications where untreated wood is permitted by IBC Section 1406.3.

5.2 Installation must comply with this report, the manufacturer's published instructions and the applicable code. When the manufacturer's published installation instructions differ from this report, this report governs.

5.3 Use of the decking as a component of a fire-resistance-rated assembly is outside the scope of this report.

5.4 The compatibility of the fasteners with the supporting construction, including chemically treated wood, is outside the scope of this report.

5.5 Only those types of fasteners and fastening methods described in this report for the installation of
deck boards and guardrail assemblies, have been evaluated. Post-to-frame connections are outside the scope of this report.

5.6 The top rail component is not permitted to be used as a handrail for stairways or ramps.

5.7 Deck boards must be installed in a minimum of a two-span condition. Deck boards used as stair treads must be installed in a minimum of a two-span condition.

5.8 The decking and guardrail assemblies, must be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted for approval. The calculations must verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The documents must contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.9 The decking and guardrail assemblies must not be used in framing applications, as for components of trusses, or as joists, rafters, studs, beams, columns, or axially loaded posts.

5.10 Adjustment factors outlined in the AF&PA National Design Specification and applicable codes do not apply to the allowable capacity and maximum spans for the deck boards and guardrail systems.

5.11 The deck boards and guardrails are produced under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with applicable portions of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174), dated January 2012.

7.0 IDENTIFICATION

Each deck board or guardrail described in this report must be identified by a label bearing the name and address of Advanced Environmental Recycling Technologies, Inc. (A.E.R.T.); the name of the deck board or guardrail; the performance level (span rating of the deck boards or allowable span for the stair treads and guardrail assemblies); and the ICC-ES evaluation report number (ESR-2388).

8.0 OTHER CODES:

8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the requirements of the following codes:

- 1997 Uniform Building Code™ (UBC)
- BOCA® National Building Code/1999 (BNBC)

The ChoiceDek, ChoiceDek FR, ChoiceDek Foundations, MoistureShield, MoistureShield FR, MoistureShield® Essential Collection, MoistureShield® Elite Collection, MoistureShield Vantage Collection, MoistureShield Vantage Collection FR, MoistureShield ModernView, MoistureShield Pro and Lifecycle Basics decking, and the ChoiceDek, MoistureShield and Lifecycle Basics guardrail systems, as described in this report, comply with, or are suitable alternatives to what is specified in those codes listed above, subject to the provisions of Section 8.2 through 8.7.

8.2 Uses:

The deck boards are limited to use as flooring for exterior balconies, porches, and decks and stair treads.

The guardrail systems are limited to exterior use as guards for balconies, porches, and decks. The products described in this report are used in exterior applications in any occupancy group in buildings of Type V-N construction under the UBC, or Type 5B construction under the BNBC.

8.3 Description:

See Section 3.0.

8.4 Installation:

See Section 4.0.

8.5 Conditions of Use:

See Section 5.0, except replace the wording in Section 5.1 with the following:

These products are limited to exterior use as deck boards and guards for balconies, porches, decks and stair treads, and similar appendages of any occupancy group of Type V-N (UBC) construction or Type 5B (BNBC) construction.

8.6 Evidence Submitted:

See Section 6.0.

8.7 Identification:

See Section 7.0.
### TABLE 1—DECK BOARD SPAN RATINGS

<table>
<thead>
<tr>
<th>PRODUCT NAME(^6)</th>
<th>PROFILE</th>
<th>NOMINAL SIZE (inch)</th>
<th>SHAPE</th>
<th>UNIFORM LIVE LOADING (ALLOWABLE CAPACITY)(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 psf</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) Essential Collection(^\circ), MoistureShield(^\circ) ModernView(^\text{TM}) and Lifecycle(^\circ) Basics</td>
<td>Figure 5</td>
<td>1x5</td>
<td>Oval Fluted; Solid; Grooved</td>
<td>16</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 5</td>
<td>1x5</td>
<td>Oval Fluted - Grooved</td>
<td>16</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Vantage Collection(^\circ)</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid; Grooved</td>
<td>16</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), ChoiceDek(^\circ) Foundations(^\text{TM}), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Oval Fluted; Oval Fluted - Grooved</td>
<td>16</td>
</tr>
<tr>
<td>ChoiceDek, MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Square Fluted; Oval Fluted;</td>
<td>18</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Elite Collection(^\circ)</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Solid</td>
<td>18</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 8</td>
<td>2x4</td>
<td>Solid</td>
<td>20</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 9</td>
<td>2x6</td>
<td>Square Fluted</td>
<td>20</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 9</td>
<td>2x6</td>
<td>Solid</td>
<td>24</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Vantage Collection(^\circ) FR</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid</td>
<td>16</td>
</tr>
<tr>
<td>ChoiceDek(^\circ) FR and MoistureShield(^\circ) FR</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Solid</td>
<td>16</td>
</tr>
<tr>
<td>ChoiceDek(^\circ) FR and MoistureShield(^\circ) FR</td>
<td>Figure 9</td>
<td>2x6</td>
<td>Solid</td>
<td>24</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ), and LifeCycle(^\circ) Basics</td>
<td>Figure 10</td>
<td>2X8</td>
<td>Solid</td>
<td>24</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield Pro(^\circ) and LifeCycle(^\circ)</td>
<td>Figure 11</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid; Grooved</td>
<td>16</td>
</tr>
</tbody>
</table>

**For SI:** 1 inch = 25.4 mm, 1 psf = 0.0479 kN/m\(^2\).

**NOTES:**

1. Members must be installed perpendicular to the supports, must be installed in a minimum two-span condition, and must be fastened at each joist.
2. Allowable capacity is adjusted for durability. No further increases are permitted.
3. Maximum allowable member span values are for members used as planking (flatwise bending).
4. Maximum allowable member span is measured center-to-center of the supporting construction.
5. Tabulated spans are based on a deflection limit of L/180.
6. Product names within the same cell are trade names for the same board.

### TABLE 2—MAXIMUM SPANS FOR DECK BOARDS USED AS STAIR TREADS

<table>
<thead>
<tr>
<th>PRODUCT(^3)</th>
<th>PROFILE</th>
<th>NOMINAL SIZE (inch)</th>
<th>SHAPE</th>
<th>MAXIMUM SPAN (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) Essential Collection(^\circ), MoistureShield(^\circ) ModernView(^\text{TM}) and Lifecycle(^\circ) Basics</td>
<td>Figure 5</td>
<td>1x5</td>
<td>Oval Fluted; Solid; Grooved</td>
<td>9</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 5</td>
<td>1x5</td>
<td>Oval Fluted Grooved</td>
<td>9</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Vantage Collection(^\circ)</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid; Grooved</td>
<td>9</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), ChoiceDek(^\circ) Foundations(^\text{TM}), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Oval Fluted; Oval Fluted - Grooved</td>
<td>9</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Square Fluted; Oval Fluted</td>
<td>12</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Elite Collection(^\circ)</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Solid</td>
<td>12</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 8</td>
<td>2x4</td>
<td>Solid</td>
<td>14</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ) and Lifecycle(^\circ) Basics</td>
<td>Figure 9</td>
<td>2x6</td>
<td>Square Fluted; Solid</td>
<td>16</td>
</tr>
<tr>
<td>MoistureShield(^\circ) Vantage Collection(^\circ) FR</td>
<td>Figure 6</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid</td>
<td>9</td>
</tr>
<tr>
<td>ChoiceDek(^\circ) FR and MoistureShield(^\circ) FR</td>
<td>Figure 7</td>
<td>(\frac{5}{8})x6</td>
<td>Solid</td>
<td>12</td>
</tr>
<tr>
<td>ChoiceDek(^\circ) FR and MoistureShield(^\circ) FR</td>
<td>Figure 9</td>
<td>2x6</td>
<td>Solid</td>
<td>18</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield(^\circ), and LifeCycle(^\circ) Basics</td>
<td>Figure 10</td>
<td>2X8</td>
<td>Solid</td>
<td>18</td>
</tr>
<tr>
<td>ChoiceDek(^\circ), MoistureShield Pro(^\circ) and LifeCycle(^\circ)</td>
<td>Figure 11</td>
<td>1x5(\frac{1}{2})</td>
<td>Solid; Grooved</td>
<td>9</td>
</tr>
</tbody>
</table>

**For SI:** 1 inch = 25.4 mm, 1 psf = 0.0479 kN/m\(^2\).
NOTES (Table 2):
1 Maximum span is measured center-to-center of the supporting construction.
2 Deck boards used as stair treads must be installed in a minimum of a two-span condition.
3 Product names within the same cell are trade names for the same board.

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>APPLICABLE BUILDING CODE</th>
<th>MAXIMUM SPAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IBC</td>
<td>IRC</td>
</tr>
<tr>
<td>ChoiceDek®, MoistureShield® and Lifecycle® Basics, 36 inches high (without post reinforcing)</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>ChoiceDek®, MoistureShield® and Lifecycle® Basics, 36 inches high (without post reinforcing)</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>ChoiceDek®, MoistureShield® and Lifecycle® Basics, 42 inches high (without post reinforcing)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ChoiceDek®, MoistureShield® and Lifecycle® Basics, 42 inches high (with post reinforcing)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTES:
1 The ability of the supporting construction to resist the reactionary loads must be justified to the satisfaction of the code official.
2 Indicates compliance with the respective building codes.
3 Maximum span is measured from center-of-post to center-of-post.
4 Maximum allowable span has been adjusted for durability. No further increases are permitted.
5 Applicable to guardrail systems described in Figure 1, Figure 2 and Figure 3.
6 ChoiceDek®, MoistureShield® and Lifecycle® Basics are trade names for the same guardrail system.
7 See exception for 36-inch-high guards in Section 1021.2 of the BNBC and Section 509.2 of the UBC.
8 Maximum span based on the guardrail assembly listed in Table 4.
9 Height of guardrails is measured from the top of decking.

**TABLE 4—GUARDRAIL ASSEMBLY**¹,²,³

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>INSTALLATION REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Figure 1 (System No. 1)</td>
</tr>
<tr>
<td>Baluster</td>
<td>2 x 2 WTCL baluster spaced a maximum of 4” between the inside openings</td>
</tr>
<tr>
<td>Railings</td>
<td>Top Guardrail Cap (optional)</td>
</tr>
<tr>
<td></td>
<td>Top Rail</td>
</tr>
<tr>
<td></td>
<td>Bottom Rail</td>
</tr>
<tr>
<td>Posts</td>
<td>4 x 4 Post – Standard (Unreinforced)</td>
</tr>
<tr>
<td></td>
<td>4 x 4 Post – Reinforced</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm; 1 foot = 305 mm.

¹ Evaluation of framing members supporting the guardrail assembly is outside the scope of this evaluation report.
² Components consist of ChoiceDek®, MoistureShield® and Lifecycle® Basics which are trade names for the same guardrail assembly.
FIGURE 1—CHOICEDEK, MOISTURESHEILD AND LIFECYCLE BASICS GUARDRAIL SYSTEM NO. 1

<table>
<thead>
<tr>
<th>POST CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTER TO CENTER POST SPACING</td>
</tr>
<tr>
<td>64&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
</tr>
</tbody>
</table>

*64" and 72" are NON-REINFORCED. 42" is REINFORCED.*
GUARDRAIL ASSEMBLY

GUARDRAIL POST CONNECTION

GUARDRAIL DETAIL

<table>
<thead>
<tr>
<th>POST CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTER TO CENTER POST SPACING</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>64&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
</tr>
</tbody>
</table>

FIGURE 2—CHOICEDEK, MOISTURESHEILD AND LIFECYCLE BASICS GUARDRAIL SYSTEM NO. 2
FIGURE 3—CHOICEDEK, MOISTURESHEILD AND LIFECYCLE BASICS GUARDRAIL ASSEMBLY NO. 3
ILLUSTRATION OF POST TO FRAME CONNECTION: OPTION 1

ILLUSTRATION OF POST TO FRAME CONNECTION: OPTION 2

THESE DRAWINGS ARE FOR ILLUSTRATION ONLY. THEY ARE NOT INTENDED FOR USE AS CONSTRUCTION DOCUMENTS FOR THE PURPOSE OF DESIGN, FABRICATION, OR ERECTION. (SEE SECTION 5.8)

FIGURE 4—ILLUSTRATION OF POST TO FRAME CONNECTION
SEE FIGURES 1 AND 2 FOR POST CRITERIA.
FIGURE 5—1x5 DECK BOARD PROFILES

FIGURE 6—1x5½ DECK BOARD PROFILES

FIGURE 7—5/4x6 DECK BOARD PROFILES

FIGURE 8—2x4 DECK BOARD OR GUARDAIL PROFILE
FIGURE 9—2x6 DECK BOARD PROFILES

FIGURE 10—2x8 DECK BOARD PROFILE

FIGURE 11—1x5\(\frac{1}{2}\) DECK BOARD PROFILE
FIGURE 12—POST AND POST SLEEVE SLEEVE

FIGURE 13—TOP GUARDRAIL PROFILES

FIGURE 14—2x2 WTCL BALUSTER
DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES  
Section: 06 53 00—Plastic Decking  
Section: 06 63 00—Plastic Railings  

REPORT HOLDER:  
ADVANCED ENVIRONMENTAL RECYCLING TECHNOLOGIES, INC. (A.E.R.T.)  
914 NORTH JEFFERSON STREET  
SPRINGDALE, ARKANSAS 72764  
(479) 756-7400  
www.aert.com  

EVALUATION SUBJECT:  
CHOICEDEK® FR AND MOISTURESHIELD® FR  

1.0 REPORT PURPOSE AND SCOPE  

Purpose:  
The purpose of this evaluation report supplement is to indicate that MoistureShield® FR and ChoiceDek® FR, recognized in ICC-ES master report ESR-2388, have also been evaluated for compliance with the codes noted below.  

Applicable code editions:  
- 2010 California Building Code (CBC)  
- 2010 California Residential Code (CRC)  

2.0 CONCLUSIONS  

2.1 CBC:  
The MoistureShield® FR and ChoiceDek® FR, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2388, comply with CBC Chapter 7, provided the design and installation are in accordance with the International Building Code® provisions noted in the master report.  

The use of the products in construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urbal Interface Fire Area requires installation in accordance with the master report and with the additional requirement of CBC Section 709A whereby the decking is attached to an exterior wall covering that is either noncombustible or ignition-resistant material.  

The products recognized in this supplement have not been evaluated for compliance with the International Wildland–Urban Interface Code®.  

2.2 CRC:  
The MoistureShield® FR and ChoiceDek® FR, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2388, comply with CRC Chapter 3, provided the design and installation are in accordance with the International Residential Code® provisions noted in the master report.  

The use of the products in construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urbal Interface Fire Area requires installation in accordance with the master report and with the additional requirement of CRC Section 327.9 whereby the decking is attached to an exterior wall covering that is either noncombustible or ignition-resistant material.  

The products recognized in this supplement have not been evaluated for compliance with the International Wildland–Urban Interface Code®.  

This supplement expires concurrently with the master report reissued April 2015.
1.0 REPORT PURPOSE AND SCOPE

Purpose:
The purpose of this evaluation report supplement is to indicate that the deck boards and guardrail systems recognized in ICC-ES master report ESR-2388 have also been evaluated for compliance with the codes noted below.

Applicable code editions:
- 2010 Florida Building Code—Building
- 2010 Florida Building Code—Residential

2.0 CONCLUSIONS

The deck boards and guardrail systems described in Sections 2.0 through 7.0 of the master evaluation report ESR-2388 comply with the 2010 Florida Building Code—Building and the 2010 Florida Building Code—Residential, provided the design and installation are in accordance with the International Building Code® provisions noted in the master report, and under the condition that decks and patios that abut the sidewall of the foundation or structure meet the requirements of Section 2304.11.4.3 of the Florida Building Code—Building.

Use of the deck boards and guardrail systems for compliance with the High-Velocity Hurricane Zone provisions of the 2010 Florida Building Code—Building and the 2010 Florida Building Code—Residential has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 9N-3, verification that the report holder’s quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report reissued April 2015.
DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 53 00—Plastic Decking
Section: 06 63 00—Plastic Railings

REPORT HOLDER:
ADVANCED ENVIRONMENTAL RECYCLING TECHNOLOGIES, INC.
914 NORTH JEFFERSON
SPRINGDALE, ARKANSAS 72764
(479) 756-7400
www.choicedek.com
www.Moistureshield.com
www.lifecycledecking.com

EVALUATION SUBJECT:
CHOICEDEK® DECKING, RAILING AND FASCIA;
MOISTURESHEL® ELITE COLLECTION® DECKING AND FASCIA;
MOISTURESHEL® VANTAGE COLLECTION® DECKING AND FASCIA;
MOISTURESHEL® ESSENTIAL COLLECTION® DECKING AND FASCIA;
MOISTURESHEL® EXTERIOR TRIM;
MOISTURESHEL® FR FIRE-RATED DECKING;
LIFECYCLE® DECKING, RAILING AND FASCIA; AND
LIFECYCLE® ECODECK DECK TILES

1.0 EVALUATION SCOPE
Compliance with the following evaluation guidelines:
- ICC-ES Evaluation Guideline for Determination of Regionally Extracted, Harvested or Manufactured Materials or Products (EG104), dated October 1, 2008

Compliance eligibility with the applicable sections of the following green building rating systems, standards and codes:
- 2010 California Green Building Standards Code (CALGreen), Title 24, Part 11 (see Table 3 for details)
- National Green Building Standard (ICC 700-2008) (see Table 4 for details)
- LEED for Homes 2008 (see Table 5 for details)
- LEED 2009 for New Construction and Major Renovations (see Table 6 for details)
- LEED 2009 for Schools New Construction and Major Renovations (see Table 7 for details)
- ANSI/GBI 01-2010—Green Building Assessment Protocol for Commercial Buildings (see Table 8 for details)

2.0 USES
The products listed are used for a variety of exterior applications, including nonstructural trim and deck boards and guardrail assemblies for balconies, porches and exterior walking surfaces.

3.0 DESCRIPTION
The products listed are wood thermoplastic composite lumber (WTCL) made from a blend of wood and polyethylene. The products are manufactured in a variety of sizes, profiles, textures and colors. EcoShield Deck Tiles and EcoDek™ Tiles are snap-together 12-by-12-inch (305 by 305 mm) deck tiles consisting of a composite lumber surface screwed to a plastic support base.

4.0 CONDITIONS
4.1 Code Compliance:
For Choicedek® Decking and Railing, MoistureShield® Elite Collection® Decking, MoistureShield® Vantage Collection® Decking, MoistureShield® Essential Collection® Decking, MoistureShield® Railing, Lifecycle® Decking and Railing and MoistureShield® FR Fire-Rated Decking, see ICC-ES evaluation report ESR-2388 for compliance with code requirements.

Evaluation of Choicedek® Fascia, MoistureShield® Elite Collection® Fascia, MoistureShield® Vantage Collection® Fascia, MoistureShield® Essential Collection® Fascia, MoistureShield® Exterior Trim, Lifecycle® Fascia MoistureShield® EcoShield™ Deck Tiles, and Lifecycle® EcoDek Deck Tiles for compliance with the requirements of the International Codes is outside the scope of this evaluation report. Compliance with all applicable code requirements must be demonstrated to the Authority Having Jurisdiction (AHJ) for product approval.

4.2 Green Rating Systems, Standards and Code Eligibility:
The information presented in Tables 3 through 8 of this report provides a matrix of areas of evaluation and corresponding limitations and/or additional project-specific requirements, and offers benefits to individuals who are assessing eligibility for credits or points.

The final interpretation of the specific requirements of the respective green building rating system and/or standard rests with the developer of that specific rating system or standard or the AHJ, as applicable.
Compliance for items noted as “Verified Attribute” is subject to any conditions noted in the tables. Decisions on compliance for those items noted as “Eligible for Points” in Tables 3 through 8 rest with the user of this report, and those items are subject to the conditions noted. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. Rating systems or standards often provide supplemental information as guidance.

5.0 BASIS OF EVALUATION

The information in this report, including the “Verified Attributes,” is based upon the following supporting documentation:

5.1 ICC-ES EG101. [Evaluation applies to ICC 700 Section 604.1; LEED Homes MR Credit 2.2; LEED NC MR Credit 4; LEED Schools MR Credit 4; CALGreen Section A4.405.3 and A5.405.4; and ANSI/GBI 01 Section 10.1.2.1.]

5.2 ICC-ES EG102. [Evaluation applies to ICC 700 Section 606.1(2); CALGreen Section A5.405.2; and ANSI/GBI 01 Section 10.1.2.2.]

5.3 ICC-ES EG104. [Evaluation applies to ICC 700 Section 608.1; LEED Homes MR Credit 2.2(c); LEED NC MR Credit 5; LEED Schools MR Credit 5; CALGreen Section A4.405.3 and A5.405.1; and ANSI/GBI 01 Section 10.1.4.1.]

5.4 Evidence of compliance with termite resistance in accordance with Section 3.9 of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174). [Evaluation applies to ICC 700 Section 602.8.]

6.0 IDENTIFICATION

Advanced Environmental Recycling Technologies, Inc., products are identified with a stamp noting the manufacturer’s name (Advanced Environmental Recycling Technologies, Inc.) and address, the product name, the manufacturing location, the ICC-ES evaluation report number (if applicable), and the name or logo of the inspection or grading agency. The report subjects are also identified on the product and/or packaging with the VAR Environmental Report number (VAR-1015) and the ICC-ES SAVE Mark, as applicable.

### TABLE 1—RECYCLED CONTENT BY WEIGHT SUMMARY

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>RECYCLED MATERIALS</th>
<th>% PRE-CONSUMER RECYCLED CONTENT</th>
<th>% POST-CONSUMER RECYCLED CONTENT</th>
<th>% TOTAL RECYCLED CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choicedek® Decking, Railing and Fascia</td>
<td>Wood</td>
<td>36.33</td>
<td>13.67</td>
<td>95.00</td>
</tr>
<tr>
<td>MoistureShield® Elite Collection® Decking and Fascia</td>
<td>Polyethylene</td>
<td>20.20</td>
<td>24.80</td>
<td>90.50</td>
</tr>
<tr>
<td>MoistureShield® Vantage Collection® Decking and Fascia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Essential Collection® Decking and Fascia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Railing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Exterior Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifecycle® decking, Railing and Fascia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OEM Products</td>
<td>Wood</td>
<td>36.33</td>
<td>13.67</td>
<td>95.00</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>20.20</td>
<td>24.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® FR Fire-Rated Decking</td>
<td>Wood</td>
<td>33.06</td>
<td>12.44</td>
<td>90.50</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>16.58</td>
<td>28.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® EcoShield Deck Tiles Lifecycle® EcoDek™ Deck Tiles</td>
<td>Wood Plastic Composite</td>
<td>50.33</td>
<td>34.25</td>
<td>95.33</td>
</tr>
<tr>
<td>Base</td>
<td>10.75</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Actual per-consumer recycled content amount is listed. For use with LEED the pre-consumer content calculation requires that pre-consumer recycled content amount can only be counted for 1/2 of the actual value.

### TABLE 2—BIODERASE MATERIAL CONTENT SUMMARY

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>MINIMUM % BIOBASED CONTENT</th>
<th>METHOD OF DETERMINATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choicedek® Decking, Railing and Fascia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Elite Collection® Decking and Fascia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Vantage Collection® Decking and Fascia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Essential Collection® Decking and Fascia</td>
<td>50.0</td>
<td>Calculation</td>
</tr>
<tr>
<td>MoistureShield® Railing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® Exterior Trim</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifecycle® Decking, Railing and Fascia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OEM products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MoistureShield® FR Fire-Rated Decking</td>
<td>45.5</td>
<td>Calculation</td>
</tr>
<tr>
<td>MoistureShield® EcoShield Deck Tiles Lifecycle® EcoDek™ Deck Tiles</td>
<td>44.5</td>
<td>Calculation</td>
</tr>
</tbody>
</table>
### TABLES 3 THROUGH 8

#### TABLE 3—SUMMARY OF AREAS OF ELEGIBILITY WITH 2010 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

<table>
<thead>
<tr>
<th>Section #</th>
<th>Section Intent</th>
<th>Possible Points</th>
<th>Conditions of Use to Qualify for Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4.405.1</td>
<td>Prefinished building materials</td>
<td>Elective</td>
<td>Utilize prefinished building materials which do not require additional painting or staining when possible.</td>
</tr>
<tr>
<td>A4.405.3</td>
<td>Regional materials</td>
<td>Elective</td>
<td>Verify local products that are extracted, processed and manufactured within California or 500 miles (805 km) of the job site. Regional material calculations based on raw material supplier to manufacturing location using the free ZIP Code Distance Calculator (<a href="http://www.zip-codes.com">www.zip-codes.com</a>).</td>
</tr>
<tr>
<td>A5.405.2</td>
<td>Bio-based materials</td>
<td>Elective</td>
<td>A.E.R.T products are qualified as bio-based.</td>
</tr>
<tr>
<td>A4.405.3</td>
<td>Bio-based materials</td>
<td>Elective</td>
<td>To achieve Tier 1 - Use materials, equivalent in performance to virgin materials, with a postconsumer or preconsumer recycled content value (RCV) for a minimum of 10% of the total value, based on estimated cost of materials on the project.</td>
</tr>
<tr>
<td>A4.405.4</td>
<td>Bio-based materials</td>
<td>Elective</td>
<td>To achieve Tier 2 - Use materials, equivalent in performance to virgin materials, with a postconsumer or preconsumer recycled content value (RCV) for a minimum of 15% of the total value, based on estimated cost of materials on the project. RCV shall be determined as follows: RCV = (% PC x material cost) + 0.5 (% PI x material cost) Notes: 1. PC means post consumer waste. 2. PI means post industrial waste.</td>
</tr>
<tr>
<td>4.505.3</td>
<td>Moisture content of building materials</td>
<td>Mandatory</td>
<td>Moisture content of interior framing members may be measured with an appropriate handheld moisture meter.</td>
</tr>
</tbody>
</table>

#### TABLE 4—SUMMARY OF AREAS OF ELEGIBILITY WITH THE ICC-700 NATIONAL GREEN BUILDING STANDARD

<table>
<thead>
<tr>
<th>Section #</th>
<th>Section Intent</th>
<th>Possible Points</th>
<th>Conditions of Use to Qualify for Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>602.8</td>
<td>Termite-resistant materials are used</td>
<td>6 max</td>
<td>To earn 6 points all structural elements must be termite resistant in areas of heavy termite infestation. 2 or 4 points are available for areas with lower infestation probability</td>
</tr>
<tr>
<td>604.1</td>
<td>Use two or more major and/or minor building materials containing recycled content</td>
<td>2-6 max</td>
<td>2, 4 or 6 points may be earned when products are used with another major building component with recycled content of 25% &lt; 50%, 50% &lt; 75%, ≥ 75%, respectively.</td>
</tr>
<tr>
<td>606.1(2)</td>
<td>Two types of bio-based materials are used, each for more than 1 percent of the project's projected building material cost</td>
<td>6</td>
<td>To earn 6 points two types of bio-based products must be used and the cost of each must be more than 1% of the projects projected building material cost.</td>
</tr>
</tbody>
</table>
### TABLE 4—SUMMARY OF AREAS OF ELEGIBILITY WITH THE ICC-700 NATIONAL GREEN BUILDING STANDARD (Continued)

<table>
<thead>
<tr>
<th>Section #</th>
<th>Section Intent</th>
<th>Possible Points</th>
<th>Conditions of Use to Qualify for Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>608.1</td>
<td>Indigenous materials</td>
<td>2 each 10 max</td>
<td>To earn 2 points verify local products are originated, produced, grow naturally or occur naturally within 500 miles (805 km) of job site. Regional material calculations based on raw material supplier to manufacturing location using the free ZIP Code Distance Calculator (<a href="http://www.zip-codes.com">www.zip-codes.com</a>).</td>
</tr>
<tr>
<td>903.4.1(3)</td>
<td>The moisture content of lumber is sampled to ensure it does not exceed 19 percent prior to the surface and/or wall cavity exposure</td>
<td>4</td>
<td>To earn 4 points the moisture content of lumber must be determined to not exceed 19%, such as measuring with a moisture meter, prior to enclosure.</td>
</tr>
</tbody>
</table>

### TABLE 5—SUMMARY OF AREAS OF ELEGIBILITY WITH USGBC’S LEED FOR HOMES

| MR 2.2 | Recycled content | 0.5 | To earn 0.5 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 the post industrial (preconsumer) content constitutes a minimum total recycled content of 25%. | ● ● ● ● |
| MR 2.2(c) | Environmentally preferable products for roof, wall and floors; interior and exterior framing and sheathing | 0.5 each 8 max | To earn points use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 90% (by weight or volume of the component. Regional material calculations based on raw material supplier to manufacturing location using the free ZIP Code Distance Calculator (www.zip-codes.com). | ○ ○ ○ N/A |

### TABLE 6—SUMMARY OF AREAS OF ELEGIBILITY WITH USGBC’S LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATION

| MR4 | Recycled content | 1 2 max | To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at least 10%, based on the cost, of the total value of the materials in the project. To earn 2 points use 20% or more. | ● ● ● ● ● |
| MR 5 (MR 5.1) | Regional materials (10% of content) | 1 | To earn 1 point use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 10% (by cost) of total materials value. To earn 2 points use a minimum of 20%. Regional material calculations based on raw material supplier to manufacturing location using the free ZIP Code Distance Calculator (www.zip-codes.com). | ○ ○ ○ N/A |
| MR 5 (MR 5.2) | Regional materials (20% of content) | 2 | | ○ ○ ○ N/A |
**Technical Information**

<table>
<thead>
<tr>
<th>Method</th>
<th>Value (Imperial)</th>
<th>Value (Metric)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Allowable Uniform Live Load</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICC-ES AC174</td>
<td>150 psi/ft²</td>
<td>7.18 kPa or 7.18 kN/m²</td>
<td>5/4 x 6 (2.98cm x 13.72cm) on 16 inch (40.64 cm) center</td>
</tr>
<tr>
<td>ASTM D7032</td>
<td>200 psi/ft²</td>
<td>9.58 kPa or 9.58 kN/m²</td>
<td>2 x 6 engineered (3.81 cm x 13.97 cm) on 16 inch (40.64 cm) center</td>
</tr>
<tr>
<td>ASTM D6106</td>
<td>200 psi/ft²</td>
<td>9.58 kPa or 9.58 kN/m²</td>
<td>2 x 6 rectangle (3.56 cm x 13.72 cm) on 16 inch (40.64 cm) center</td>
</tr>
<tr>
<td>100 psi/ft²</td>
<td>4.79 kPa or 4.79 kN/m²</td>
<td>2 x 6 rectangle (3.56 cm x 13.72 cm) on 24 inch (60.96 cm) center</td>
<td></td>
</tr>
<tr>
<td>200 psi/ft²</td>
<td>9.58 kPa or 9.58 kN/m²</td>
<td>2 x 4 (3.81 cm x 8.89 cm) in 16 inch (40.64 cm) center</td>
<td></td>
</tr>
<tr>
<td>50 psi/ft²</td>
<td>2.87 kPa or 2.87 kN/m²</td>
<td>1 x 5 (2.54 cm x 12.70 cm) on 16 inch (40.64 cm) center</td>
<td></td>
</tr>
<tr>
<td>Loads based on flexural stress of 250 psi/in² (1,723.7 kN/m², 1,723.7 kPa), modulus of elasticity of 100,000 psi/in² (889.5 MN/m², 889.5MPa)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Flame Spread**
ASTM E84: 100 Class "C" or Class III. Within the range of wood species commonly used for joists.

**Smoke Developed Index**
ASTM E84: 350 Within the range expected for solid wood.

**Self Ignition**
ASTM D1929: 741°F 394°C

**Flash Ignition**
ASTM D1929: 729°F 393°C

**Coefficient of Friction**
ASTMD2934: 0.59/0.54 Static Dry Parallel/Perpendicular to grain
ASTMD2934: 0.92/0.84 Static Wet Parallel/Perpendicular to grain

**Modulus of Elasticity**
ASTM D7032: 100,000 psi/in² 689.5 Mpa or 689.5 MN/m²
1. Value used to compute maximum allowable uniform live load for decking and railing applications.
2. Includes deductions for loss in stiffness due to temperature, UV exposure, and freeze-thaw cycles per ASTM D7032.
3. This value is given for informational purposes only and is NOT presented as a general design value.

ASTM D7032: 268,000 psi/in² 1,847.8 Mpa or 1,847.8 MN/m²
Average value at ambient temperature. Not adjusted for temperature, freeze-thaw, UV exposure etc.

**Modulus of Rupture**
ASTM D7032: 2,500 psi/in² 17.2 Mpa or 17.2 MN/m²
Average value at ambient temperature. Not adjusted for temperature, freeze-thaw, UV exposure etc.

**Flexural Stress**
ASTM D7032: 250 psi/in² 1.72 Mpa or 1.72 MN/m²
1. Value used to compute maximum allowable uniform live load for decking and railing applications.
2. Includes deductions for loss in stiffness due to temperature, UV exposure, and freeze-thaw cycles per ASTM D7032.
3. This value is given for informational purposes only and is NOT presented as a general design value.

**Screw Withdrawal, 5/4 nominal thickness**
ASTM D7032: 899.4 lb 3.11 kN
Average value from all 5/4 profiles. #7 x 2½ finish head through thickest part of board 120 lbs/in (210 N/cm) of thread penetration with safety factor of 5.

**Screw Withdrawal, 2" nominal thickness, average**
ASTM D1037: 819.7 lb 3.65 kN #7 x 2½ finish head through thickest part of board 131 lbs/in (230 N/cm) of thread penetration with safety factor of 5.

**Screw Pull-Through, 5/4 nominal thickness**
ASTM D1037: 373.4 lb 1.66 kN Average value from all 5/4 profiles. #7 x 2½ finish head through thickest part of board

**Screw Pull-Through, 2" board nominal thickness**
ASTM D1037: 812.8 lb 2.73 kN Average value from all 2" profiles. #7 x 2½ finish head through thickest part of board

**Screw Lateral Withdrawal, 5/4 nominal**
AC 174: 474.7 lb 2.11 kN Average value from all 5/4 profiles. #7 x 2½ finish head through thickest part of board

**Screw Lateral Withdrawal, 2" nominal**
AC 174: 441.0 lb 1.96 kN Average value from all 2" profiles. #7 x 2½ finish head through thickest part of board
<table>
<thead>
<tr>
<th>Method</th>
<th>Value (Imperial)</th>
<th>Value (Metric)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nail Head Pull-Through, 16d Casing Nail</td>
<td>199.0 bf</td>
<td>0.885 kN</td>
<td>Through thinnest part of standard 5/4 x 6 profile.</td>
</tr>
<tr>
<td>Nail Head Pull-Through, 8d Box Nail</td>
<td>850.7 bf</td>
<td>2.86 kN</td>
<td>Through thinnest part of standard 5/4 x 6 profile.</td>
</tr>
<tr>
<td>Equivalent Specific Gravity</td>
<td>0.50</td>
<td>-</td>
<td>National Design Specification.</td>
</tr>
<tr>
<td>Heat Deflection Temperature @ 284 psi</td>
<td>157°F</td>
<td>69°C</td>
<td></td>
</tr>
<tr>
<td>Vicat Softening Point</td>
<td>242°F</td>
<td>116°C</td>
<td></td>
</tr>
<tr>
<td>Compressive Strength</td>
<td>682 lbs/in²</td>
<td>6.632 kPa or 6.632 kN/in²</td>
<td>5/4 x 6 standard deck board, flatwise.</td>
</tr>
<tr>
<td>Compressive Modulus</td>
<td>21,926 lbs/in²</td>
<td>151.2 kPa or 151.2 MN/m²</td>
<td>5/4 x 6 standard deck board, flatwise.</td>
</tr>
<tr>
<td>Deformation at Maximum Load</td>
<td>0.1626 in</td>
<td>4.136 mm</td>
<td>5/4 x 6 standard deck board, flatwise. Maximum load 15,902 lbs (75.18 kN, 7.666.6 kg).</td>
</tr>
<tr>
<td>Concentrated Load for Manufactured Housing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janka Ball Hardness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density of composite</td>
<td>57.7 lbs/ft³</td>
<td>0.927 g/cm³</td>
<td>Specimen emissivity 0.00</td>
</tr>
<tr>
<td>Weight Per Linear Foot (5/4 x 6 grooved bottom)</td>
<td>2.39 lb/ft²</td>
<td>3.56 kg/m</td>
<td></td>
</tr>
<tr>
<td>Weight Per Linear Foot (5/4 x 6 rectangular profile)</td>
<td>2.41 lb/ft²</td>
<td>3.59 kg/m</td>
<td></td>
</tr>
<tr>
<td>Weight Per Linear Foot (2 x 6 rectangular profile)</td>
<td>3.14 lb/ft²</td>
<td>4.67 kg/m</td>
<td></td>
</tr>
<tr>
<td>Weight Per Linear Foot (1 x 5 grooved bottom)</td>
<td>1.83 lb/ft²</td>
<td>2.72 kg/m</td>
<td></td>
</tr>
<tr>
<td>Weight of Decking per Square Foot Installed Deck, 5/4 x 6 grooved bottom</td>
<td>5.07 lb/ft²</td>
<td>24.8 kg/m²</td>
<td>Boards spaced ½ inch side to side</td>
</tr>
<tr>
<td>Weight of Decking per Square Foot Installed Deck, 5/4 x 6 rectangular</td>
<td>5.13 lb/ft²</td>
<td>25.1 kg/m²</td>
<td>Boards spaced ½ inch side to side</td>
</tr>
<tr>
<td>Weight of Decking per Square Foot Installed Deck, 2 x 6 rectangular</td>
<td>6.66 lb/ft²</td>
<td>32.5 kg/m²</td>
<td>Boards spaced ½ inch side to side</td>
</tr>
<tr>
<td>Weight of Decking per Square Foot Installed Deck, 1 x 5 grooved bottom</td>
<td>4.18 lb/ft²</td>
<td>20.4 kg/m²</td>
<td>Boards spaced ½ inch side to side</td>
</tr>
<tr>
<td>Thermal Expansion, 5/4 x 6</td>
<td>2.0 x 10⁻⁶ in/in/F</td>
<td>3.6 x 10⁻⁵ cm/cm/°C</td>
<td></td>
</tr>
</tbody>
</table>