**Customer:**
Tom's Widgets  
111 Main Street  
Anywhere, USA

**Prepared by:**
Challenger Pallet & Supply, Inc.  
24 North 3210 East  
Idaho Falls, ID 83401  
800-733-0205  
PDS License: 189  
Printed: July 24, 2014

**Pallet ID:** 44x44 BOXED WIDGETS  
**Classification:** 44.00 x 44.00, Stringer-Class, Double-Face Non-Reversible, 2-Way, Reusable, New Manufacture

### Components

#### Top Deck:
- **Style:** Deckboard  
- **Type:** New Lumber  
- **Number:** 8  
- **Thickness:** 0.688  
- **Width:** 3.500  
- **Length:** 44.00  
- **Volume:** 5.9 bd ft

#### Bottom Deck:
- **Style:** Deckboard  
- **Type:** New Lumber  
- **Number:** 4  
- **Thickness:** 0.688  
- **Width:** 3.500  
- **Length:** 44.00  
- **Volume:** 2.9 bd ft

#### Stringers:
- **Type:** New Lumber  
- **Number:** 4  
- **Width:** 1.500  
- **Height:** 3.500  
- **Length:** 44.00  
- **Volume:** 6.4 bd ft

### Fasteners:
- **Fastener ID:** 2G625  
- **Fastener Type:** Helically Threaded Nail  
- **Fastener Length:** 2.25  
- **Thread Length:** 1.50  
- **Thread Diameter:** 0.128  
- **Wire Diameter:** 0.113  
- **Head Diameter:** 0.281  
- **Flutes:** 5  
- **Helixes:** 6.0  
- **Pitch:** 0.250  
- **Thread Angle:** 72  
- **MIBANT Angle:** 37  
- **FWC:** 2.32  
- **Total Number:** 96  

### Materials

#### New Lumber:
- **Lumber ID:** SPF  
- **Species Class:** Utility & BTR  
- **Grade:** SPF  
- **Moisture Content (at manufacture and assembly):** Air Dry - 19%  
- **Total New Lumber Volume:** 15.2 bd ft

### Spec Sheet Notes:

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**Pallet Design System (PDS)**

*Developed and owned by:*  
**National Wooden Pallet and Container Association (NWPCA)**

Research and development for early versions of PDS were conducted in cooperation with:  
- Center for Unit Load Design, Virginia Tech Department of Wood Science and Forest Products;  
- USDA, Forest Service and Forest Products Laboratory;  
- APA - The Engineered Wood Association;  
- Software Technologies Laboratory, Virginia Tech Department of Industrial and Systems Engineering

The recommendations from PDS are based on the NWPCA’s continuing program of laboratory and field research. They represent the best available engineering information compiled to date. However, the quality of workmanship, the input data, and the conditions in which pallets are used may vary widely. Therefore, the Association cannot accept responsibility for pallet performance or design as actually constructed. Wood pallets manufactured to this PDS design are for the sole purpose of storing and/or transporting material. Under no circumstances should any person stand, step, or lean upon them or otherwise use them for support.

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**Classification:**  
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**General Load Type:**  
Uniformly Distributed - Full Pallet Coverage

**Load Weight Variability:**  
Medium

**Service Environment:**  
Dry Environment (EMC <= 19%)

### Support Condition

<table>
<thead>
<tr>
<th>Side View</th>
<th>End View</th>
<th>Safe Maximum Load</th>
<th>Deflection at Maximum Load</th>
<th>User Specified Deflection Limit</th>
<th>Maximum Load for Deflection Limit</th>
<th>Critical Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse Storage</td>
<td></td>
<td>10810 lbs.</td>
<td>0.15 in.</td>
<td>0.25 in.</td>
<td>NA</td>
<td>Interior Top Deckboard</td>
</tr>
<tr>
<td>Stacked 1 Unit Load High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stacked 2 Unit Loads High</td>
<td></td>
<td>6352 lbs. per pallet</td>
<td>0.17 in.</td>
<td>0.25 in.</td>
<td>NA</td>
<td>Interior Bottom Deckbd</td>
</tr>
</tbody>
</table>

### Lateral Collapse Resistance

- **Low**
- **Medium**
- **Good**
- **Excellent**

\[ H/V = 1.57 \]
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### Average Pallet Weight

<table>
<thead>
<tr>
<th></th>
<th>At Manufacture</th>
<th>At 15% MC</th>
<th>At 12% MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Pallet Weight</td>
<td>38 lbs.</td>
<td>36 lbs.</td>
<td>35 lbs.</td>
</tr>
</tbody>
</table>

### Dimensional Change due to Wood Drying

<table>
<thead>
<tr>
<th>Component</th>
<th>Original Dimension</th>
<th>Shrinkage from Manufacture to 19% MC</th>
<th>Shrinkage from Manufacture to 15% MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Deckboards</td>
<td>0.688 in. Thickness 3.500 in. Width</td>
<td>0.005 in. (+/- 0.001 in.)</td>
<td>0.025 in. (+/- 0.007 in.)</td>
</tr>
<tr>
<td>Stringers</td>
<td>3.500 in. Height 1.500 in. Width</td>
<td>0.025 in. (+/- 0.007 in.)</td>
<td>0.011 in. (+/- 0.003 in.)</td>
</tr>
<tr>
<td>Bottom Deckboards</td>
<td>0.688 in. Thickness 3.500 in. Width</td>
<td>0.005 in. (+/- 0.001 in.)</td>
<td>0.025 in. (+/- 0.007 in.)</td>
</tr>
</tbody>
</table>
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Container Type: Corrugated Box
Box Style: Regular Slotted Container (RSC) #0201
Combined Board Type: Singlewall
Flute Profile: C-Flute
Caliper: 0.156
ECT: 32.000

Weight per Box: 20 lbs.
Number of Boxes per Layer: 4
Number of Layers per Unit Load: 5
Total Weight of Load: 400 lbs.
Total Height of Load: 50.000 in.

Load Stabilizers
Wrap Type: Stretch Wrap

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