

**NATIONAL SAFETY CODE  
Standard 10 – Cargo Securement**

**Guidance:**

**Securement of  
Dressed Lumber and Similar Building Materials  
on Flatbed Trucks and Trailers**

**Updated  
September 2010**

## **Disclaimer**

The guidance that is provided in this document is offered for convenience only. For accurate reference, please consult the National Safety Code Standard 10 ([www.ccmta.ca](http://www.ccmta.ca)) and the applicable provincial and territorial regulations.

### **\*Minimum Strength of Securement System (*DIVISION 3, Section 10*)**

- The **aggregate working load limit** of the cargo securement system used to secure an article or group of articles of cargo on or within a vehicle shall be not less than 50% of the weight of the article or total weight of the group.
- “**Aggregate working load limit**” is the sum of One-half of the working load limit for each end section of a tiedown that is attached to an anchor point.

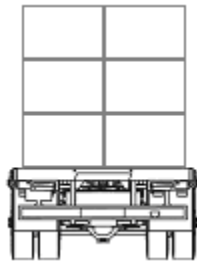
### **Section**

#### **41(1) Application**

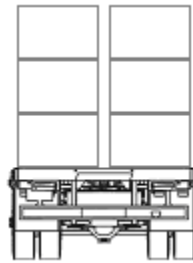
This division applies to the transportation of **bundles** of dressed lumber and packaged lumber, and unitized building products, including plywood, gypsum board or other materials of similar shape.

#### **42 Side by Side**

Where bundles are placed **side by side** each bundle shall be in direct contact with each other, or a method shall be used that prevents the bundles from moving towards each other.



***CORRECT***



***INCORRECT***

#### **46(1) Bundles placed directly on top of other bundles**

Bundles carried in 2 or more layers placed directly on top of other bundles or on spacers of adequate size and orientation, shall be secured by:

- tiedowns over the top layer of bundles, in accordance with provisions of section 22 of this Standard, with a minimum of two tiedowns for bundle(s) longer than 1.52 m (5'), and
- tiedowns over the middle layer of bundles in accordance with the provisions of section 22 of this Standard, for each stack of bundles higher than 1.85 m (6') composed of more than two layers

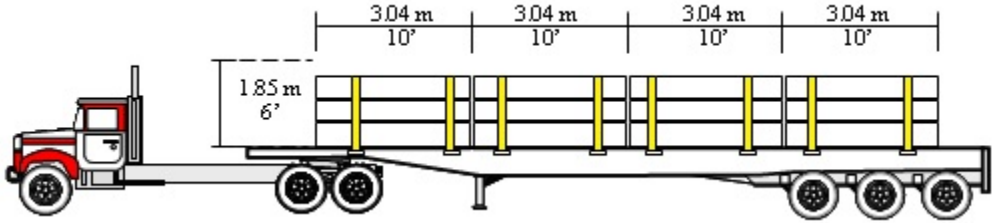
**MINIMUM NUMBER OF TIEDOWNS REQUIRED FOR BUNDLES OF  
DRESSED LUMBER AND UNITIZED BUILDING PRODUCTS (SECTION 46)**

ARTICLE DESCRIPTION	Layers in Stack	Height of Stack	Article Blocked/Immobilized*		Article <u>Not</u> Blocked/Immobilized	
			Top Layer (# Tiedowns required)	Middle Layers (# Tiedowns required)	Top Layer (# Tiedowns required)	Middle Layers (# Tiedowns required)
1.52m (5ft) or shorter and 500kg (1100lb) or lighter	2 layers	Any height	1	Not required	1	Not required
	3 or more layers	1.85 metres or less	1	Not required	1	Not required
	3 or more layers	More than 1.85 metres	1	1 over <b>middle</b> layer	1	1 over <b>middle</b> layer
1.52m (5 ft) or shorter and over 500kg (1100 lb)	2 layers	Any height	1	Not required	2	Not required
	3 or more layers	1.85 metres or less	1	Not required	2	Not required
	3 or more layers	More than 1.85 metres	1	1 over <b>middle</b> layer	2	2 over <b>middle</b> layer
More than 1.52m (5 ft) but 3.04m (10 ft) or less	2 layers	Any height	2	Not required	2	Not required
	3 or more layers	1.85 metres or less	2	Not required	2	Not required
	3 or more layers	More than 1.85 metres	2	1 over <b>middle</b> layer	2	2 over <b>middle</b> layer
Longer than 3.04m (10 ft)	2 layers	Any height	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Not required	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Not required
	3 or more layers	1.85 metres or less	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Not required	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Not required
	3 or more layers	More than 1.85 metres	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Tiedowns over <b>middle</b> layer: <ul style="list-style-type: none"> <li>• 1 for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	<ul style="list-style-type: none"> <li>• 2 tiedowns for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>	Tiedowns over <b>middle</b> layer: <ul style="list-style-type: none"> <li>• 2 for first 3.04m (10') of cargo, <b>plus</b></li> <li>• 1 tiedown for every 3.04m (10') or part thereof</li> </ul>

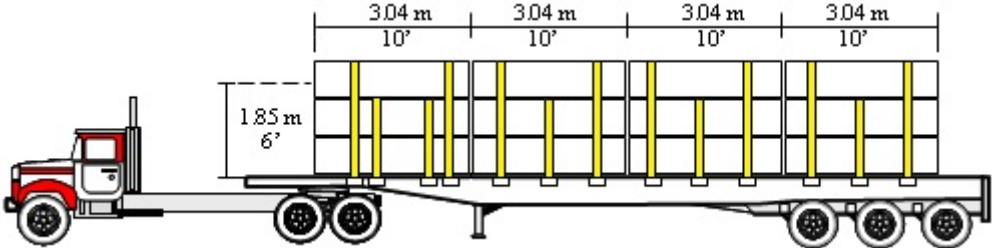
\*Articles of cargo must be blocked or immobilized by a front-end structure, bulkhead or other immobilized cargo to prevent it from moving forward.

**Note:** Additional tiedowns may be required to ensure the aggregate working load limit is at least 50% of the weight of the cargo the tiedowns are securing.

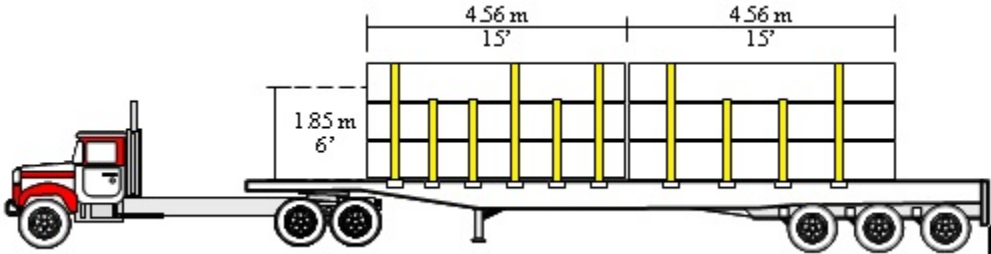
# Securement Illustrations



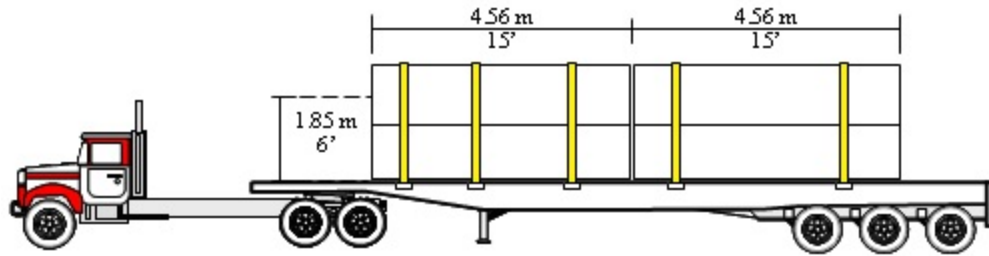
- Each stack has three layers; height of stacks is 1.85 metres (6') or less.
- Bundles are more than 1.52 m (5') in length and require a minimum of two tiedowns over the top of each stack. No belly wraps tiedowns required on middle bundles (stacks are less than 1.85 m (6') high).



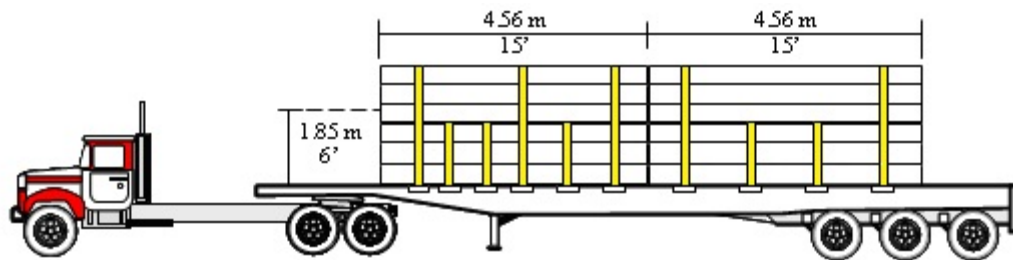
- Each stack has three layers; height of stacks is more than 1.85 m (6')
- First lift not butted or immobilized against vehicle structure, require at least 2 belly wrap tiedowns. Second, third and fourth lifts are butted or immobilized against other bundles, therefore a minimum of 1 belly wrap tiedown required for the second, third and fourth lifts. Minimum 2 tiedowns over bundles on top layer.



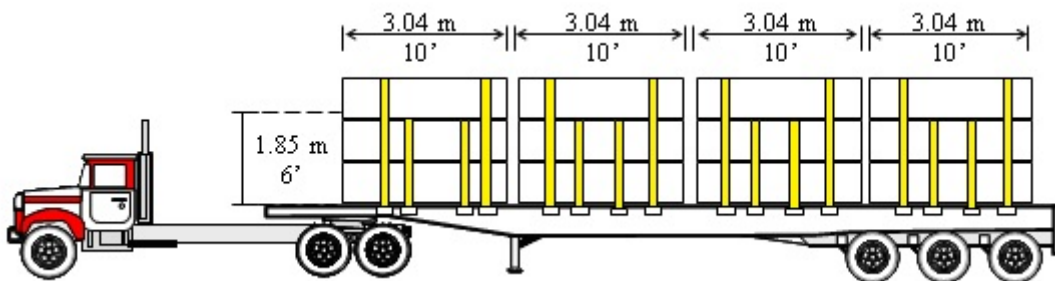
- Each stack has three layers; height of stacks is more than 1.85 m (6')
- First lift not butted or immobilized against vehicle structure, require at least 3 belly wrap tiedowns and a minimum of 3 tiedowns over top layer.
- Second lift is butted or immobilized against other bundles therefore 1 tiedown may be reduced on belly wrapped layers and top layer(s) of second lift.



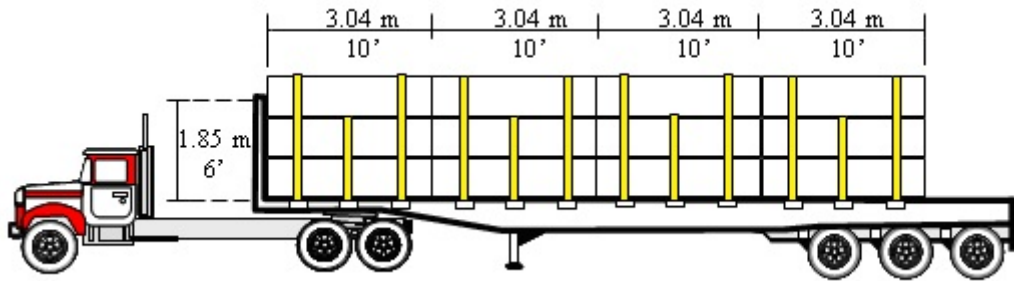
- Only two layers high, therefore does not require belly wrap tiedowns. Must meet the 50% aggregate WLL for tiedowns over top layers.



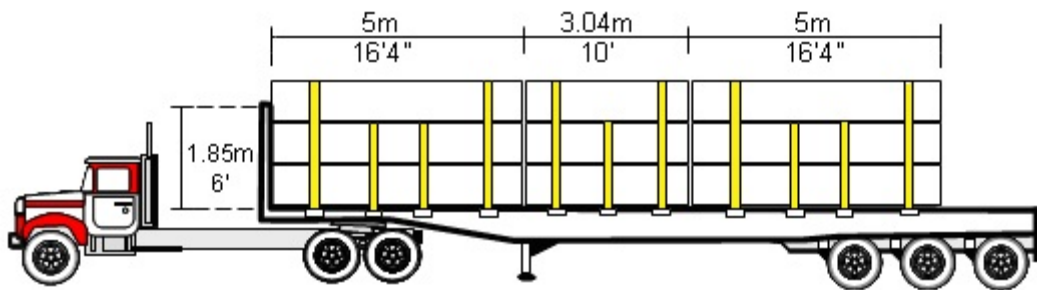
- Each stack has more than three layers and is more than 1.85 m (6') high.
- Belly wrap tiedowns are required over the middle layers.



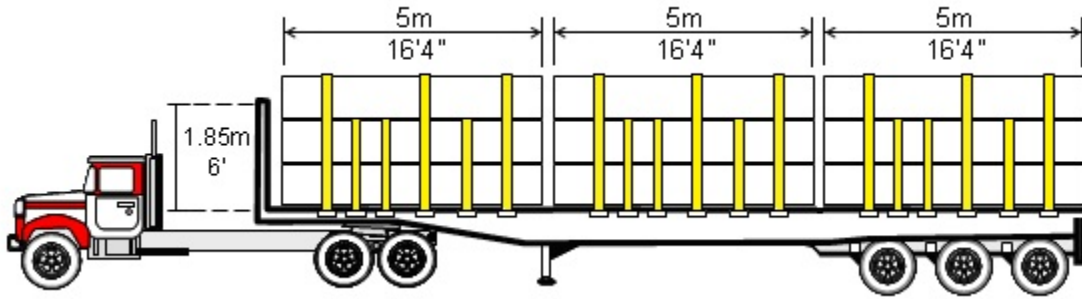
- Each stack has three layers; height of stacks is more than 1.85 m (6').
- The stacks are not butted or immobilized against forward movement.
- Requires a minimum of two belly wrap tiedowns over second layers and a minimum of 2 tiedowns over top layers for each stack due to length of cargo.



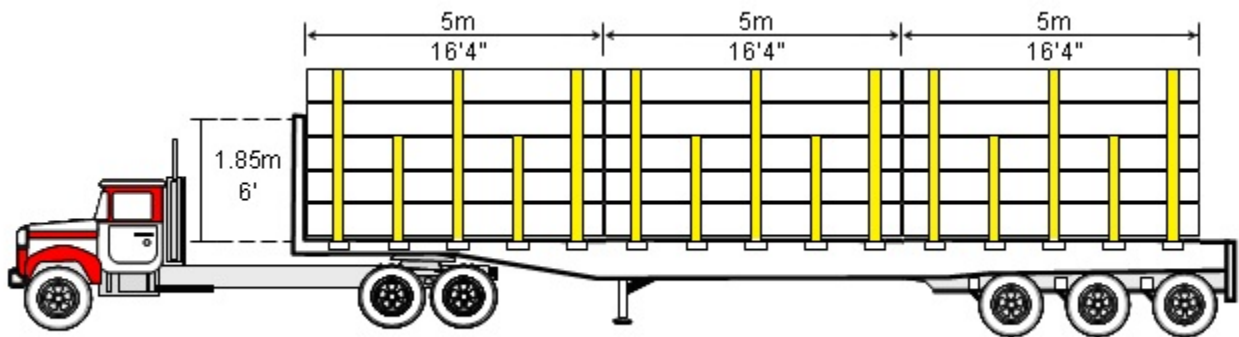
- Trailer equipped with bulkhead.
- Each stack has three layers; height of stacks is more than 1.85 m (6')
- First stack is butted or immobilized against vehicle structure and each additional stack is also butted or immobilized against other stacks.
- Requires minimum 2 tiedowns on top layers. Second layers require a minimum of 1 belly wrap tiedown due to length of cargo.



- Trailer equipped with bulkhead.
- Each stack has three layers; height of stacks is more than 1.85 m (6').
- First stack is butted or immobilized against vehicle structure and each additional stack is also butted or immobilized against other stacks.
- Minimum 2 tiedowns required over top layers due to length of bundles. Second layers require a minimum of 2 belly wrap tiedowns for the front and rear lifts and minimum a minimum of 1 belly wrap tiedown for the middle lift, due to length of bundle.



- Trailer equipped with bulkhead.
- Each stack has three layers; height of stacks is more than 1.85 m (6').
- Three layers high, three lifts not butted or immobilized against forward movement, require a minimum of 3 belly wrap tiedowns and a minimum of 3 tiedowns over top layers for each group or lift(s) due to length of bundle.



- Fifth layer on first lift not butted or immobilized against vehicle structure, therefore at least 3 tiedowns are required due to length of bundle.
- A minimum of 2 belly wrap tiedowns are required over middle layer on each lift as they are immobilized against forward movement.