

The cover features a central dark blue diamond containing a world map with glowing connection lines. This diamond is surrounded by a thick teal border that forms a larger diamond shape. Four smaller teal diamonds are positioned at the corners of the page, and a thin teal line runs diagonally across the background.

Keeping It Tight Flatdeck Load Securement Quick Reference Guide

Training for Your Sector

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These standards are following the National Safety Code for Motor Carriers Standard 10: Cargo Securement –June 2013 and updated section from 2016

INTRODUCTORY NOTES

The standard was drafted with the objective to provide jurisdictions with a standard which can be adopted by reference. Each jurisdiction may encounter situations where existing legislation or regulations contain definitions or provisions which conflict or overlap with the contents of this Standard. For this reason, the following sections are offered for a general reflection of the Standard only.

INTERPRETATION

In this Standard, "anchor point" means the part of the structure, fitting or attachment on a vehicle or cargo to which a tiedown is attached;

"bell pipe" means concrete pipe with a flanged end that is bigger in diameter than the barrel;

"blocking" means a substantial structure, device or article placed against or around cargo to prevent horizontal movement;

"bolster" means a transverse, load bearing, structural horizontal component of a bunk securing device;

"bracing" means a structure, device or article placed against another structure, device or article to prevent tipping;

"bulkhead" means a vertical barrier across a vehicle to prevent the cargo moving forward;

"bundle" means articles that have been unitized for the purpose of securing them as a single article with a uniform shape;

"bunk" means a horizontal bolster that (i) is installed transversely across a vehicle, and(ii) is fitted with a stake at each end;

"cab shield" means a vertical barrier(i) placed directly behind the cab of a truck or truck tractor, and(ii) capable of protecting the driver if cargo moves forward;

"cargo" means all articles or material carried by a vehicle, including those used in the operation of the vehicle;

"cargo securement system" means the method by which cargo is contained or secured and includes vehicle structures, securing devices and all components of the system; "chock" means a tapered or wedge-shaped part used to prevent round articles from rolling;

"cleat" means a short piece of material nailed to the deck to reinforce blocking;

"coil bunk" means a device that keeps the timbers supporting a metal coil in place;

"contained" with respect to cargo means that (i) the cargo fills a sided vehicle,

National Safety Code for Motor Carriers Standard 10: Cargo Securement –June201310 -8(ii) every article is in contact with or close to a wall or other articles, and(iii) the cargo cannot move or tip;

"container chassis vehicle" means a vehicle specifically built for and fitted with locking devices for the transport of intermodal containers;

"cradle" means a structure that holds a circular article and prevents it from rolling;

"cylinder well" means the depression formed between 2 cylindrical articles when they are laid against each other with their eyes horizontal and parallel;

"deck" means the floor of a vehicle onto which the cargo is loaded;

"driver" includes the owner of the vehicle if the owner of the vehicle is not the carrier;

"dunnage" means loose material used to support and protect cargo;

"duty status" means, in respect of a driver, any of the following periods:(i)off-duty time spent in a sleeper berth;(ii)off-duty time, other than time spent in a sleeper berth;(iii)driving time; or(iv)on-duty time, other than driving time;

"edge protector" means a device put on the exposed edge of an article of cargo(i) to protect a tiedown or the article from damage, or(ii) to distribute tiedown forces over a greater area;

"flatbed vehicle" means a vehicle with a deck but no permanent sides;

"forward" with respect to a vehicle means towards the cab or engine;

"friction mat" means a device placed between a deck and cargo, or between articles of cargo, that increases the friction between them;

"front end structure" means a vertical barrier across the front of a deck that prevents cargo moving forward;

"heavy vehicle" means (i) a vehicle that weighs more than 4 500 kilograms, or(ii) equipment or machinery that operates on wheels or tracks and weighs more than 4 500 kilograms;

"integral locking device" means a device that is designed and used to restrain an article of cargo by connecting and locking attachment points on the article to anchor points on the vehicle;

"large pipe" means concrete pipe with an inside diameter of more than 114.3cm;

"lengthwise" means along the vehicle from the cab or tongue at the front to the rear;

"light vehicle" means an automobile, truck or van that weighs 4,500 kilograms or less;

"log" includes a utility pole, a treated pole and a building component of a log cabin;

"pallet" means a platform or tray on which cargo is placed so that it can be handled as a unit;

"restrain" includes prevent from tipping or moving;

"rub rail" means a rail along the side of a vehicle that protects the side of the vehicle from impact;

"securing device" means a device specifically designed and manufactured to attach, restrain or secure cargo;

"small pipe" means concrete pipe with an inside diameter of up to 114.3 cm;

"spacer" means material placed under an article, or between layers of articles, to make loading and unloading easier;

"stake" means a part, including a standard, that (i) is mounted close to vertical on a vehicle frame or as part of a bunk, and (ii) that immobilizes cargo placed against it;

"strapping" means tensioned strips of material that are clamped or crimped back on themselves;

"tiedown" means a combination of securing devices that are attached to one or more anchor points on a vehicle;

"transport" means the carriage of cargo by a vehicle while on a highway;

"unitized" means wrapped, banded or bound together so that several articles can be handled as a single article of cargo or behave as a single article;

"vehicle" means a truck, a truck tractor, individually or in combination with one or more semitrailers or trailers;

"working load limit" (WLL) means the maximum load that may be applied to a component of a cargo securement system during normal service determined in accordance with Divisions 3 and 4 of Part 1.



PART 1 -GENERAL PROVISIONS

Division 1 -Application

2(1)This Standard applies to a vehicle or combination of vehicles (a) transporting cargo on a highway, and(b) exceeding a registered gross vehicle weight of 4,500 kg.

(2)This Standard applies when an intermodal container is used to transport cargo.

Inspection

3 (1)The driver of a vehicle shall(a) inspect the vehicle to confirm that the vehicle's tailgate, tailboard, doors, tarpaulins and spare tire, and other equipment used in its operation, are secured,(b) ensure that the cargo does not interfere with the driver's ability to drive the vehicle safely, and(c) ensure that the cargo does not interfere with the free exit of a person from the cab or driver's compartment of the vehicle.

(2)The driver of a vehicle shall inspect the vehicle's cargo and the cargo securement system used and make necessary adjustments:(a) before driving the vehicle, and(b) not more than 80 kilometres from the point where the cargo was loaded.

(3) The driver of a vehicle shall regularlyre-inspect the vehicle's cargo and the cargo securement systems used and make adjustments to the cargo or cargo securement system as necessary, including adding more securing devices,at intervals based on whichever of the following occurs first:(a) there is a change of duty status of the driver,(b) the vehicle has been driven for 3 hours; or(c)the vehicle has been driven for 240 kilometres.

(4)Subsections (2) and (3) do not apply to a driver where(a) the cargo is sealed in a vehicle and the driver has been ordered not to open it to inspect the cargo, or(b) the vehicle is loaded in a manner that makes the cargo, or portions of the cargo, inaccessible.

(5)The driver of a vehicle transporting logs, before the vehicle enters a highway from a private road, shall: (a) inspect the vehicle, the logs and the securing devices to ensure compliance with this Standard, and(b) make necessary adjustments to the securing devices, including adding more securing devices.



Division 2 -General Performance Criteria Cargo Securement Systems

4 (1) Cargo securement systems, and each component of a system, used to contain, immobilize or secure cargo on or within the vehicle shall be strong enough to withstand the forces described in section 5(1).

(2) The components of the cargo securement system of a vehicle (a) shall be in proper working order, (b) shall be fit for the purpose for which they are used, (c) shall have no knots, damaged or weakened components that will adversely affect their performance for cargo securement purposes, and (d) shall not have any cracks or cuts.

(3) A securing device, integral locking device, movable structure or blocking device used to secure cargo to a vehicle shall itself be secured in a manner that prevents it from becoming unfastened while the vehicle is on a highway.

Performance criteria

5(1) The cargo securement system shall be capable of withstanding the forces that result if the vehicle is subjected to each of the following accelerations: (a) 0.8 g deceleration in a forward direction; (b) 0.5 g deceleration in a rearward direction; (c) 0.5 g acceleration in either sideways direction.

(2) The cargo securement system shall provide a downward force equal to at least 20 % of the weight of an article of cargo if the article is not fully contained within the structure of the vehicle.

(3) The load on a component of a cargo securement system that reacts to a force referred to in subsection (1) or (2), shall not exceed the working load limit of the component.

Appropriate system

6 (1) The cargo securement system used to contain, immobilize or restrain cargo shall be appropriate for the size, shape, strength and characteristics of the cargo.

(2) The securing devices used to secure cargo on or within a vehicle shall be (a) designed and constructed for the purpose for which they are used, and (b) used and maintained in accordance with the manufacturer's instructions.

Equivalent Means of Securement

7 Where cargo transported by a vehicle is contained, immobilized or secured in accordance with the applicable requirements of Divisions 3, 4 and 5 and Part 2, it meets the requirements of Section 5.

Quick Reference

ARTICLE DESCRIPTION	Layers in Stack	Height of Stack	Article Blocked/Immobilized*		Article Not 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 <u>middle</u> layer	1	1 over <u>middle</u> 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 <u>middle</u> layer	2	2 over <u>middle</u> 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 <u>middle</u> layer	2	2 over <u>middle</u> layer
Longer than 3.04m (10 ft)	2 layers	Any height	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Not required	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Not required
	3 or more layers	1.85 metres or less	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Not required	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Not required
	3 or more layers	More than 1.85 metres	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Tiedowns over <u>middle</u> layer: <ul style="list-style-type: none"> • 1 for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	<ul style="list-style-type: none"> • 2 tiedowns for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof 	Tiedowns over <u>middle</u> layer: <ul style="list-style-type: none"> • 2 for first 3.04m (10') of cargo, plus • 1 tiedown for every 3.04m (10') or part thereof

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