

Identification of Chain Load Capacity

The provisions of section 11 (4) of Standard 10 of the National Safety Code for Motor Carriers have been in force since January 1, 2011 (see Appendix for details). This section is integrated into section 4 of the *Cargo Securement Standards Regulation* (Order-in-Council 583-2005). It is now prohibited to use a tiedown (strap, chain or cable) unless it is marked by the manufacturer with respect to its working load limit (WLL). This standard may be obtained from the website of the Canadian Council of Motor Transport Administrators (CCMTA) at www.ccmta.ca.

The provisions of this section are aimed at improving road safety through the use of tiedowns bearing a manufacturer's WLL mark. Specifically with regard to chains, the regulation stipulates that one must be able to clearly read the WLL mark on one of the chain's links regardless of its degree of wear. This measure will ensure the compliance of all tiedowns based on, among other things, the weight of the transported cargo.

In some cases, the originally legible WLL mark on a tiedown can fade from use. The degree of fading will vary according to the quality of the original mark. Given the importance of using certified tiedowns, it's always a good idea to look closely at the quality of the manufacturer's WLL mark when purchasing tiedowns to endure legibility and durability. Another good idea, especially for those who use chains, is to protect the manufacturer's mark on the tiedown to reduce the risk of premature fading.

Some chain manufacturers and distributors wanted to solve the problem of wear on the WLL mark on some chains by adding another type of identification. This idea has resulted in numerous and repeated queries directed at staff of the Ministère des Transports du Québec to obtain some clarification in this regard.

In response to these queries, the Ministère intends to approve, under certain conditions, additional markings on chains using another method of identification (plate, sleeve...). However, at no time may this additional marking serve as a substitute for placing a WLL mark on the chain during its manufacture. In addition, upon verification, one must be able to ascertain that there is a manufacturer's WLL mark on the chain even if it has become illegible through usage.

Version française disponible sur demande.

Conditions of Compliance

To be considered in compliance, any additional identification on a chain must:

- Bear a manufacturer's mark clearly indicating its grade on one of the links when it is affixed on the chain;
- Comply with the corresponding standard bearing the name of the "Welded Steel Chain Specifications" of the National Association of Chain Manufacturers (NACM);
- Bear a mark or symbol (e.g.: name or trademark) clearly indicating the company that is affixing the new identification;
- Bear a mark indicating the chain's grade (e.g.: 3,4,43,7,70,700, etc.);
- Be sealed to the chain so it cannot be separated from it, thus making the new identification unusable by others if it becomes separated from the chain (e.g.: company name or logo on the seal).

The company which affixes this new identification becomes the manufacturer under the terms of Standard 10 and thus assumes the role and legal liabilities of the manufacturer. The company must also be able to furnish a certificate of compliance if so requested by the customer.

From now until the end of 2011, the Ministère des Transports du Québec will monitor this practice to assess its effectiveness. At the end of this evaluation period, the Ministère reserves the right to permanently suspend approval of this practice. In such a case, any additional marking of a chain will cease to be recognized officially as a manufacturer's WLL mark in compliance with Standard 10.

For more information on cargo securement, please visit the Ministère des Transports du Québec website at www.mtq.gouv.qc.ca or dial 1-888-355-0511.

Appendix

Standard 10 of the National Safety Code for Motor Carriers Securing Devices Marked with Working Load Limit

11(1) The working load limit of a tiedown or a component of a tiedown that is marked by its manufacturer with a numeric working load limit is the marked working load limit.

(2) A tiedown or a component of a tiedown that is marked by its manufacturer in accordance with a standard referred to in Part 4 has a working load limit equal to that standard.

(3) A chain that is marked by the manufacturer in accordance with the table of Working Load Limits under Part 4 – Section 7 has a working load limit equal to the amount shown for the grade and size.

(4) A person shall not use a tiedown or a component of a tiedown to secure cargo to a vehicle unless it is marked by the manufacturer with respect to its working load limit.

Section 7 - Chain Assemblies

National Association of Chain Manufacturers

Welded Steel Chain Specifications

Welded Steel Chain – Working Load Limits

Size mm (in)	Grade 3 Proof coil	Grade 43 High test	Grade 70 Transport	Grade 80 Alloy	Grade 100 Alloy
7 mm (1/4 in)	580 kg (1300 lb.)	1180 kg (2600 lb)	1430 kg (3150 lb)	1570 kg (3500 lb)	1950 kg (4300 lb)
8 mm (5/16 in)	860 kg (1900 lb.)	1770 kg (3900 lb)	2130 kg (4700 lb)	2000 kg (4500 lb)	2600 kg (5700 lb)
10 mm (3/8 in)	1200 kg (2650 lb.)	2450 kg (5400 lb)	2990 kg (6600 lb)	3220 kg (7100 lb)	4000 kg (8800 lb)
11 mm (7/16 in)	1680 kg (3700 lb.)	3270 kg (7200 lb)	3970 kg (8750 lb)	-	-
13 mm (1/2 in)	2030 kg (4500 lb.)	4170 kg (9200 lb)	5130 kg (11300 lb)	5400 kg (12000 lb)	6800 kg (15000 lb)
16 mm (5/8 in)	3130 kg (6900 lb.)	5910 kg (13000 lb)	7170 kg (15800 lb)	8200 kg (18100 lb)	10300 kg (22600 lb)
Chain marks	3 30 300	4 43 430	7 70 700	8 80 800	10 100 1000