



## Risk Control

# Chains and Binders

Safe and effective load securement starts with thorough pre-trip planning. Before you begin to secure your load, ensure that your chains and binders are in good working condition and they meet the requirements for the load you plan to transport. Consider the consequences of injury, damage and downtime associated with failing to safely and properly securing your load.

### Chains

Federal Motor Carrier Safety Administration (FMCSA) Cargo Securement rules state:

- At least two tie downs for equipment less than 10,000 lbs.
- At least four tie downs for heavy equipment more than 10,000 lbs. with tie downs having a minimum Working Load Limits (WLL) of 5,000 lbs.
- Grade 70 Transport Chain is high quality, high strength carbon steel chain and the most common chain used for securing heavy equipment.
- Refer to FMCSA 393.108 Tables for specific Working Load Limits for chain.

### Working Load Limits For Marked Grade 70 Chains

Size	Working Load Limit
10mm (3/8 inch)	6,600 lbs.
13 mm (1/2 inch)	11,300 lbs.
16mm (5/8 inch)	15,800 lbs.

### Working Load Limits For Unmarked Chains

Size	Working Load Limit
10mm (3/8 inch)	2,650 lbs.
13 mm (1/2 inch)	4,500 lbs.
16mm (5/8 inch)	6,900 lbs.

All chains should be periodically inspected before each use. Identify and replace damaged chains to ensure your load will be safely secured and to reduce potential downtime during roadside inspections.

### What to look for:

- Excessive wear
- Elongation
- Nicks
- Gouges
- Cracks
- Suitability for the application

**Binders/Tensioners:**

Binders must also be kept in good working condition and inspected periodically. Your hooks and binders should also be marked showing their WLL. Remember, your WLL of a tie down is the lowest WLL of any of its components, which includes the tensioner.

**When Using Binders:**

- Wear gloves to prevent hand injury.
- Never use cheater bars.
- Use caution tensioning and releasing lever binders.
- Apply slow and steady tension.
- Always lock and secure the binder to prevent load shift.

To learn more about how CNA's Risk Control services can help you manage your risks and increase efficiencies please visit [cna.com/riskcontrol](https://cna.com/riskcontrol).