

LOAD SECUREMENT PRODUCTS, “Any load-carrying vehicle must be loaded and driven in such a manner as to prevent danger to any person, or damage to any property” this is why it is extremely important to use and know how to use quality load securement products.

Minimum Number of Tiedowns

Each cargo securement system must be able to withstand a minimum amount of force in each direction.

Forward Force = 80% of cargo weight when breaking while driving straight ahead.

Rearward Force = 50% of cargo weight when accelerating, shifting gears while climbing a hill, or breaking in reverse.

Sideways Force = 50% of cargo weight when turning, changing lanes, or breaking while turning.

Upward Force = 20% of cargo weight when travelling over bumps in the road or cresting a hill.

This requirement is satisfied when the cargo is “fully contained”

All elements of the vehicle structure, anchor points and tiedowns must be strong enough to withstand the forces described above (see guide table on number of chains and tie down straps required for loads in weight on following pages).

Always ensure each tiedown is attached and secured so that it does NOT become loose or unfastened, open, or release during transit.

Minimum number of tie downs required will also depend upon the length of the article(s) being secured. When an article is not blocked or positioned to prevent forward movement by a bulkhead or headboard, or by other cargo that is positioned to avoid movement and other appropriate blocking devices, loads must be secured by at least:

- A) One Tiedown if the article is 5 feet (1.52 metres) or less in length, and 1,100 pounds (500kgs) or less in weight.
- B) Two tiedowns if the article is 5 feet (1.52 metres) or less in length and more than 1,100 pounds (500kgs) in weight.
- C) Two tiedowns if the article is longer than 5 feet (1.52 metres) but less than or equal to 10 feet (3.04 metres) in length, irrespective of weight and more than 1,100 pounds (500kgs) in weight.
- D) Two tiedowns if the article is longer than 10 feet (3.04 meters), and one additional tiedown for every 10 feet (3.04 meters) of article length, or fraction thereof, beyond the first 10 feet (3.04 meters) of length.

Log Wrappers

To determine the required amount of load encircling wrappers for long logs on logging trucks use the following formula; Aggregate working load limit of tie downs used to secure each stack shall be at least 1/6 of the weight of the stack.

Example would be 35,000 kg load of long logs using 3/8” wire rope wrappers: $35,000\text{kgs} \div 6 (1/6) = 5,833\text{kgs}$ $5,833\text{kgs} \div 1,360\text{kgs (WLL of 3/8” wrapper)} = 4.28$ Therefore a total of 5 load wrappers would be required to secure this load.

To determine the required amount of load encircling wrappers for short logs on logging trucks use the following formula; Aggregate working load limit of tie downs used to secure each stack shall be at least 1/6 of the weight of the stack.

Example would be 14,000 kg load of short logs using 3/8” wire rope wrappers:

$14,000\text{kgs} \div 6 (1/6) = 2,333\text{kgs}$ - $2,333\text{kgs} \div 1,360\text{kgs (WLL of 3/8” wrapper)} = 1.71$ Therefore a total of 2 load wrappers would be required to secure each load.

Please check with Bluejay or the Federal Motor Carriers Safety Administration DOT Regulations for special requirements on securing Dressed Lumber, Metal Coils, Paper Rolls, Concrete Pipe, Vehicles and other special loads. Its important that you also check your local regulations to ensure that you conform to their requirements.

