

Securing Coils for Shipping and Related Requirements

The US Department of Transportation, Federal Motor Carrier Safety Administration (FMCSA) provides specific requirements regarding shipping of products, including metal coils. The complete FMCSA requirements can be found in the Code of Federal Regulations. The following provisions of the code relate to securing cargo and safe loading:

- Shifting or Falling Cargo: [FMCSA, 49CFR393.100](#)
- Safe Loading: [FMCSA, 49CFR392.9](#),
- Rules for Securing Metal Coils: [FMCSA, CFR393.120](#)

It is typical for shipping companies to properly secure cargo. Carriers assume responsibility for complying with DOT regulations, and coil coaters do not accept liability for the carriers' responsibility to properly secure loads. Some companies require their carriers to acknowledge their familiarity with the federal shipping requirements and to agree to abide by the DOT regulations.

Attached is a form that can be used by NCCA members in this regard.

Some companies also include signs in their facilities to make drivers aware of their responsibility to be aware of the applicable regulations. An example of such a sign in a coil coating facility follows:



This Tool Kit is part of a series of educational aids developed by the members of the National Coil Coating Association. NCCA is a trade association of coil coaters and suppliers of raw materials and equipment used in the coil coating process. The association concentrates its efforts on providing educational resources and assisting its members in providing superior products and services to their customers. NCCA Tool Kits are informational tools and should not be used as substitutes for instructions from individual manufacturers. Always consult with individual manufacturers for specific instructions regarding their products and equipment.



National Coil Coating Association

Notice of US Department of Transportation Shipping Regulations

The United States Department of Transportation has adopted detailed requirements governing safe shipping of cargo. These requirements address safe loading procedures, provisions designed to prevent shifting or falling cargo, and other provisions generally intended to safeguard the public. Motor carriers are expected to be aware of and to comply fully with all Department of Transportation regulations.

Attached as a reminder are regulations related to safe loading and securement of metal coils. These provisions are provided as a reminder only, and you are expected to be aware of and to comply with all DOT regulations.

I am familiar with the US DOT regulations for shipping and agree to fully comply with all DOT regulations.

Driver Name: _____

Carrier: _____

Date: _____

49CFR§ 392.9 Inspection of Cargo, Cargo Securement Devices and Systems.

(a) *General.* A driver may not operate a commercial motor vehicle and a motor carrier may not require or permit a driver to operate a commercial motor vehicle unless—

(1) The commercial motor vehicle's cargo is properly distributed and adequately secured as specified in §§393.100 through 393.136 of this subchapter.

(2) The commercial motor vehicle's tailgate, tailboard, doors, tarpaulins, spare tire and other equipment used in its operation, and the means of fastening the commercial motor vehicle's cargo, are secured; and

(3) The commercial motor vehicle's cargo or any other object does not obscure the driver's view ahead or to the right or left sides (except for drivers of self-steer dollies), interfere with the free movement of his/her arms or legs, prevent his/her free and ready access to accessories required for emergencies, or prevent the free and ready exit of any person from the commercial motor vehicle's cab or driver's compartment.

(b) *Drivers of trucks and truck tractors.* Except as provided in paragraph (b)(4) of this section, the driver of a truck or truck tractor must—

(1) Assure himself/herself that the provisions of paragraph (a) of this section have been complied with before he/she drives that commercial motor vehicle;

(2) Inspect the cargo and the devices used to secure the cargo within the first 50 miles after beginning a trip and cause any adjustments to be made to the cargo or load securement devices as necessary, including adding more securement devices, to ensure that cargo cannot shift on or within, or fall from the commercial motor vehicle; and

(3) Reexamine the commercial motor vehicle's cargo and its load securement devices during the course of transportation and make any necessary adjustment to the cargo or load securement devices, including adding more securement devices, to ensure that cargo cannot shift on or within, or fall from, the commercial motor vehicle. Reexamination and any necessary adjustments must be made whenever—

(i) The driver makes a change of his/her duty status; or

(ii) The commercial motor vehicle has been driven for 3 hours; or

(iii) The commercial motor vehicle has been driven for 150 miles, whichever occurs first.

(4) The rules in this paragraph (b) do not apply to the driver of a sealed commercial motor vehicle who has been ordered not to open it to inspect its cargo or to the driver of a commercial motor vehicle that has been loaded in a manner that makes inspection of its cargo impracticable.

CFR49§ 393.120 Rules for Securing Metal Coils

(a) *Applicability.* The rules in this section apply to the transportation of one or more metal coils which, individually or grouped together, weigh 2268 kg (5000 pounds) or more. Shipments of metal coils that weigh less than 2268 kg (5000 pounds) may be secured in accordance with the provisions of §§393.100 through 393.114.

(b) *Securement of coils transported with eyes vertical on a flatbed vehicle, in a sided vehicle or intermodal container with anchor points* —(1) *An individual coil.* Each coil must be secured by tiedowns arranged in a manner to prevent the coils from tipping in the forward, rearward, and lateral directions. The restraint system must include the following:

(i) At least one tiedown attached diagonally from the left side of the vehicle or intermodal container (near the forwardmost part of the coil), across the eye of the coil, to the right side of the vehicle or intermodal container (near the rearmost part of the coil);

(ii) At least one tiedown attached diagonally from the right side of the vehicle or intermodal container (near the forwardmost part of the coil), across the eye of the coil, to the left side of the vehicle or intermodal container (near the rearmost part of the coil);

(iii) At least one tiedown attached transversely over the eye of the coil; and

(iv) Either blocking and bracing, friction mats or tiedowns must be used to prevent longitudinal movement in the forward direction.

(2) *Coils grouped in rows.* When coils are grouped and loaded side by side in a transverse or longitudinal row, the each row of coils must be secured by the following:

(i) At least one tiedown attached to the front of the row of coils, restraining against forward motion, and whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(ii) At least one tiedown attached to the rear of the row of coils, restraining against rearward motion, and whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(iii) At least one tiedown over the top of each coil or transverse row of coils, restraining against vertical motion. Tiedowns going over the top of a coil(s) must be as close as practicable to the eye of the coil and positioned to prevent the tiedown from slipping or becoming unintentionally unfastened while the vehicle is in transit; and

(iv) Tiedowns must be arranged to prevent shifting or tipping in the forward, rearward and lateral directions.

(c) *Securement of coils transported with eyes crosswise on a flatbed vehicle, in a sided vehicle or intermodal container with anchor points* —(1) *An individual coil.* Each coil must be secured by the following:

(i) A means (e.g., timbers, chocks or wedges, a cradle, etc.) to prevent the coil from rolling. The means of preventing rolling must support the coil off the deck, and must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit. If timbers, chocks or wedges are used, they must be held in place by coil bunks or similar devices to prevent them from coming loose. The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited;

(ii) At least one tiedown through its eye, restricting against forward motion, and whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container; and

(iii) At least one tiedown through its eye, restricting against rearward motion, and whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container.

(2) *Prohibition on crossing of tiedowns when coils are transported with eyes crosswise.* Attaching tiedowns diagonally through the eye of a coil to form an X-pattern when viewed from above the vehicle is prohibited.

(d) *Securement of coils transported with eyes lengthwise on a flatbed vehicle, in a sided vehicle or intermodal container with anchor points* —(1) *An individual coil—option 1.* Each coil must be secured by:

(i) A means (e.g., timbers, chocks or wedges, a cradle, etc.) to prevent the coil from rolling. The means of preventing rolling must support the coil off the deck, and must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit. If timbers, chocks or wedges are used, they must be held in place by coil bunks or similar devices to prevent them from coming loose. The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited;

(ii) At least one tiedown attached diagonally through its eye from the left side of the vehicle or intermodal container (near the forward-most part of the coil), to the right side of the vehicle or intermodal container (near the rearmost part of the coil), making an angle no more than 45 degrees, whenever practicable, with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(iii) At least one tiedown attached diagonally through its eye, from the right side of the vehicle or intermodal container (near the forward-most part of the coil), to the left side of the vehicle or intermodal container (near the rearmost part of the coil), making an angle no more than 45 degrees, whenever practicable, with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(iv) At least one tiedown attached transversely over the top of the coil; and

(v) Either blocking, or friction mats to prevent longitudinal movement.

(2) *An individual coil—option 2.* Each coil must be secured by:

(i) A means (e.g., timbers, chocks or wedges, a cradle, etc.) to prevent the coil from rolling. The means of preventing rolling must support the coil off the deck, and must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit. If timbers, chocks or wedges are used, they must be held in place by coil bunks or similar devices to prevent them from coming loose. The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited;

(ii) At least one tiedown attached straight through its eye from the left side of the vehicle or intermodal container (near the forward-most part of the coil), to the left side of the vehicle or intermodal container (near the rearmost part of the coil), and, whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(iii) At least one tiedown attached straight through its eye, from the right side of the vehicle or intermodal container (near the forward-most part of the coil), to the right side of the vehicle or intermodal container (near the rearmost part of the coil), and whenever practicable, making an angle no more than 45 degrees with the floor of the vehicle or intermodal container when viewed from the side of the vehicle or container;

(iv) At least one tiedown attached transversely over the top of the coil; and

(v) Either blocking or friction mats to prevent longitudinal movement.

(3) *An individual coil—option 3.* Each coil must be secured by:

(i) A means (e.g., timbers, chocks or wedges, a cradle, etc.) to prevent the coil from rolling. The means of preventing rolling must support the coil off the deck, and must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit. If timbers, chocks or wedges are used, they must be held in place by coil bunks or similar devices to prevent them from coming loose. The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited;

(ii) At least one tiedown over the top of the coil, located near the forward-most part of the coil;

(iii) At least one tiedown over the top of the coil located near the rearmost part of the coil; and

(iv) Either blocking or friction mats to prevent longitudinal movement in the forward direction.

(4) *Rows of coils.* Each transverse row of coils having approximately equal outside diameters must be secured with:

(i) A means (e.g., timbers, chocks or wedges, a cradle, etc.) to prevent each coil in the row of coils from rolling. The means of preventing rolling must support each coil off the deck, and must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit. If timbers, chocks or wedges are used, they must be held in place by coil bunks or similar devices to prevent them from coming loose. The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited;

(ii) At least one tiedown over the top of each coil or transverse row, located near the forward-most part of the coil;

(iii) At least one tiedown over the top of each coil or transverse row, located near the rearmost part of the coil; and

(iv) Either blocking, bracing or friction mats to prevent longitudinal movement.

(e) *Securement of coils transported in a sided vehicle without anchor points or an intermodal container without anchor points.* Metal coils transported in a vehicle with sides without anchor points or an intermodal container without anchor points must be loaded in a manner to prevent shifting and tipping. The coils may also be secured using a system of blocking and bracing, friction mats, tiedowns, or a combination of these to prevent any horizontal movement and tipping.