

## Packaging Information - Strapping Table

**PRODUCT SHOULD BE STRAPPED AND CHECKED IN ACCORDANCE TO THE FOLLOWING:**

**½" cts – 16" IPS 30 FEET & GREATER JOINTS - BUNDLES AND BULK PACKS**

Number of Layers	Minimum Number of Total Straps	Minimum Number of Belly Straps	
1	5	N/R	Not Required
2	8	3	(3) Between Layers 1 & 2
3	8	3	(3) Between Layers 2 & 3
4	8	3	(3) Between Layers 2 & 3
4 40,000 lbs. +	11	6	(3) Between Layers 2 & 3 (3) Between Layers 3 & 4
5	11	6	(3) Between Layers 2 & 3 (3) Between Layers 4 & 5
6	11	6	(3) Between Layers 2 & 3 (3) Between Layers 4 & 5
7	11	6	(3) Between Layers 3 & 4 (3) Between Layers 5 & 6
8	11	6	(2) Between Layers 2 & 3 (2) Between Layers 5 & 6 (2) Between Layers 7 & 8
9	11	6	(2) Between Layers 3 & 4 (2) Between Layers 6 & 7 (2) Between Layers 8 & 9
10	11	6	(2) Between Layers 3 & 4 (2) Between Layers 6 & 7 (2) Between Layers 9 & 10

**JOINT LENGTHS 17' THROUGH 29' (DOUBLE COLUMN LOADS)**

Number of Layers	Minimum Number of Total Straps	Minimum Number of Belly Straps	
1	6	N/R	Not Required
2	10	4	(4) Between Layers 1 & 2
3	10	4	(4) Between Layers 2 & 3
4	10	4	(4) Between Layers 2 & 3
4 40,000 lbs. +	14	8	(4) Between Layers 2 & 3 (4) Between Layers 3 & 4
5	14	8	(4) Between Layers 2 & 3 (4) Between Layers 4 & 5
6	14	8	(4) Between Layers 2 & 3 (4) Between Layers 5 & 6
7	14	8	(4) Between Layers 3 & 4 (4) Between Layers 6 & 7
N/A			
N/A			
N/A			

**18" IPS/16' DIPS – 54" STRIP LOADS WITH CHOCKS - 30 FEET & GREATER**

Number of Layers	Minimum Number of Total Straps	Minimum Number of Belly Straps	
1	5	N/R	Not Required
2	8	3	(3) Between Layers 1 & 2
3	11	6	(3) Between Layers 1 & 2 (3) Between Layers 2 & 3
4	11	6	(2) Between Layers 1 & 2 (2) Between Layers 2 & 3 (2) Between Layers 3 & 4
5	11	6	(2) Between Layers 2 & 3 (2) Between Layers 3 & 4 (2) Between Layers 4 & 5

**STRIP LOADS - JOINT LENGTHS 17' THROUGH 29'**

Number of Layers	Minimum Number of Total Straps	Minimum Number of Belly Straps	
1	6	N/R	Not Required
2	10	4	(4) Between Layers 1 & 2
3	14	8	(4) Between Layers 1 & 2 (4) Between Layers 2 & 3
4	14	8	(4) Between Layers 2 & 3 (4) Between Layers 3 & 4
5	14	8	(4) Between Layers 2 & 3 (4) Between Layers 4 & 5

**ADDITIONAL REQUIREMENTS:**

- 1- The minimum number of top straps shall be five on all loads with pipe lengths 30' and greater.
- 2- Belly straps must be tightened firmly before and after tightening the top straps. If you tighten the belly straps again, you must also tighten the top straps.
- 3- All mixed loads must follow the same strapping requirements as listed above. Additional straps may be added.
- 4- For strip loads, ensure that at least the top strap at the front and rear of the truck is placed outside the last loose stringer with chocks.
- 5- Half the straps are used on each column of products for 17' – 29' joints.
- 6- Two – 2" straps may be used in the place of One – 3" or 4" strap.
- 7- Joint lengths of 12' to 16' result in three columns of product on the trailer for which 16 straps limit the number of layers to five or less. Joint lengths of 10' or 11' result in four columns of product on the trailer for which 16 straps limit the number of layers to four or less.
- 8- Loads of ½" CTS to 16" IPS with 4 layers 30' & greater weighting 40,000 lbs and heavier require three extra belly straps between layers 3 & 4.
- 9- Loads of ½" CTS to 16" IPS with 4 layers 17' thru 29' weighting 40,000 lbs and heavier require four extra belly straps between layers 3 & 4.
- 10- Listed strapping guidelines in the table are the minimum acceptable. The use of additional straps is acceptable.

## Packaging Information - Strapping Table

**11- Coils:**

- a. 50" or smaller skids – 1 strap over 2 skids.
  - If the last four skids are strapped with an (x) fashion it does not require a safety belt strap.
  - If the last two skids are strapped by themselves, it requires a safety belt strap to be added.
- b. 67" or larger skids – 1 strap over each skid, **EXCEPT FRONT AND REAR SKIDS, WHICH REQUIRE 2 STRAPS.**
  - Note: (1) 2" strap may be used along with (1) 3" or 4" strap
  - Safety belt strap for 67" and larger skids are at the plant's discretion when needed.

Nylon straps must be placed on protective strips on all silo packs of 8100 products and, at plants discretion, on all other products where stretch wrap is wrapped around the silo pack.

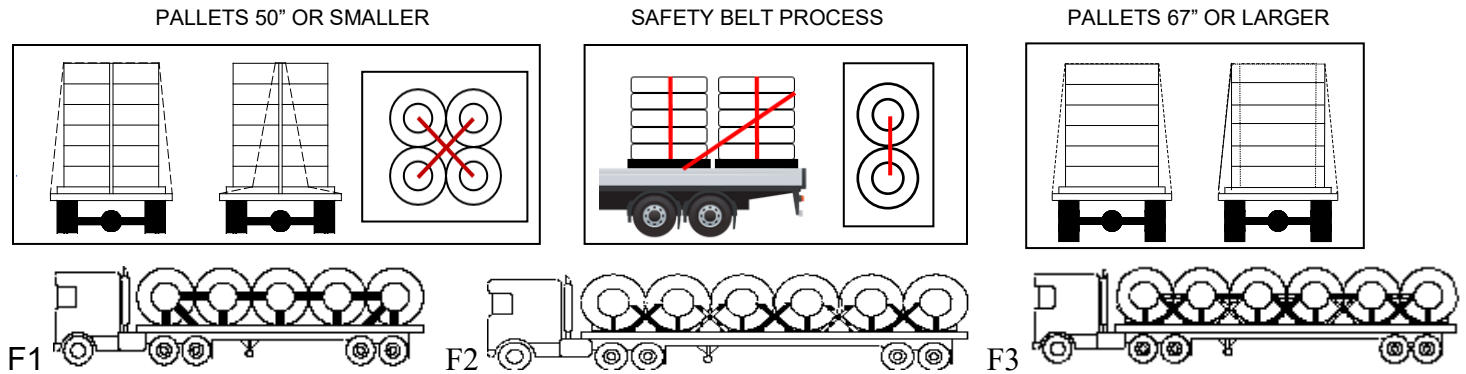


Figure 1 (With use of strap ratchets).

Figure 2 & 3 (Without use of strap ratchets, x- straps alternating from side to side).

**Additional Requirements:**

1. Strap ratchets to join coils are optional, but when employed they should be alternated between trailer sides as allowed. The example in all three figures can be used for trucks with or without cradles. Note: In figure 3 the straps are wrapped around the coils to secure them.
2. Additional straps may be placed on the load at the driver's discretion.
3. The use of bungee cords to attach tarps is optional, however if used unprotected hooks must not come in contact with the pipe.
4. Upright coils shipped without cradles and without the use of strap ratchets should be secured together with banding. This may be done by securing banding to the two coils that will sit next to one another on the truck while they are on the ground before they are placed on the truck. This will help to prevent the coils from spreading apart during shipment after they are strapped.

**In Route:**

1. Straps should be inspected and tightened:
  - a. Within 50 miles of origin and again every 150 miles or every three hours, whichever comes first.
  - b. During each stop, especially after sitting overnight.
  - c. Whenever ambient conditions change due to rain, sleet, snow, high wind, elevation change, or anything else that could result in a temperature change.

**Pipe Unloading:**

1. The truck driver shall give the unloading recommendations provided by Performance Pipe to a site representative when arriving at the delivery site.
2. The load and trucker nylon straps shall be inspected prior to removing the straps securing the load.
3. The truck driver shall stay in a safe location that is a safe distance from the material handling activities while the customer sequentially unloads the product.

Date: \_\_\_\_\_ Driver Name \_\_\_\_\_

Company \_\_\_\_\_ Pickup / Delivery Number \_\_\_\_\_

Trailer Number \_\_\_\_\_