

Ragglestick Packaging, LLC

How To Build A Ragglestick Package

"PVC Ragglesticks" are packaging products that were developed during 25 years of constantly working to eliminate packaging problems, with the sole objective of making better, longer lasting, denser packages for plastic tubular products. They are very well suited to be used in the packaging of sewer and water main PVC pipe, although applications are not limited to this usage. They are the answer to a rectangular package without sideboards.

"PVC Ragglesticks" are formed from PVC tubes to closely conform to the curvature of the product being packaged. They are used in both vertical and horizontal modes if the product being packaged requires that much restraint and rigidity. "PVC Ragglesticks" have been used to ship more than one billion pounds of D-3034 Sewer Main Pipe ranging in sizes 4" through 24". They have performed extremely well and are a proven contributor to the bottom line of the income statement, by providing freight savings, virtually no training time, and less in-plant maintenance costs on packaging equipment. There are no containment frames, no carts, and no packaging frames required when using "Plastic Ragglesticks". A fixture [Red in the photo] to hold the first layer of pipe in position is the total outlay for equipment.



We believe that the "PVC Ragglestick" is the most innovative, most cost-effective product ever developed for packaging tubular products. To be used effectively requires only minimal skills and practically no training time. The Ragglesticks naturally guide the packager to how and where they should be placed, and a knowledge of adequate strapping tension is quickly acquired. They are a production supervisor's answer to how best to utilize entry-level labor skills.

To see a video of package construction, click on: https://youtu.be/fmTq_-zvoIE



In the interest of providing you with a rapid changeover to PVC Ragglesticks, we provide packaging instructions based on what we have learned, knowing that you, the customer, will find additional and different ways of using the "PVC Ragglestick." We are committed to helping you use them in any way that best fits your packaging needs.

BASE STICK: The board on which the package rests.

It can be a plain 2x4 board with a strap stapled to it, or it can be a plain board with only a strapping groove milled into it. Simply place the board with the strap underneath on the floor and place a fixture as shown in the picture above next to the board and start stacking pipe on the board. To fabricate the fixture, you will need to weld two short uprights on a piece of 3" channel the width of the package to contain the bottom layer of pipe. Building the package begins with a strap to secure the first layer of pipe to the bottom boards.

To pass on to you our packaging knowledge, two sizes will be presented to give you as much insight as possible. The following instructions do not cover all the possible loading schemes for each size but are intended to provide the basics of using PVC Ragglesticks for a typical package of that size pipe.

4" with a 20 ft Laying Length

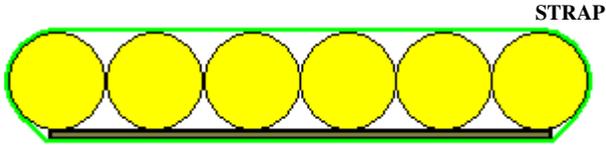
LOAD INFORMATION: Package is 12 pipes wide by 7 rows high, 84 pieces or 1680 feet. Typically, 20-foot lengths can have 12 bundles per truckload.

1. Place containment channels on the floor 13' to 14' apart, parallel to each other.
2. Place a base board on the outside of each containment channel.
3. Add a 3rd baseboard at the mid-point between the containment channels
4. Place first layer of pipe on containment channels.
5. Place a strap around the first layer and under the board to secure the layer to the board
6. Place a plastic ragglestick directly over each containment channel and just left or right of the middle strapping board to avoid obstructing the middle strap.
7. Place another layer (12 pipe) and a plastic ragglestick and repeat this step until the desired number of layers is in the package. Do not put a plastic ragglestick on the top layer.
8. Place a plain base stick on top layer, directly over the bottom boards in all 3 positions, and if appropriate, with strapping groove turned up.
9. Secure strapping through base board and top board and around the bundle.
10. Make the strap tight enough that there are no gaps between saddles and pipe, and the strap when "plunked" like a banjo, has a high pitch.

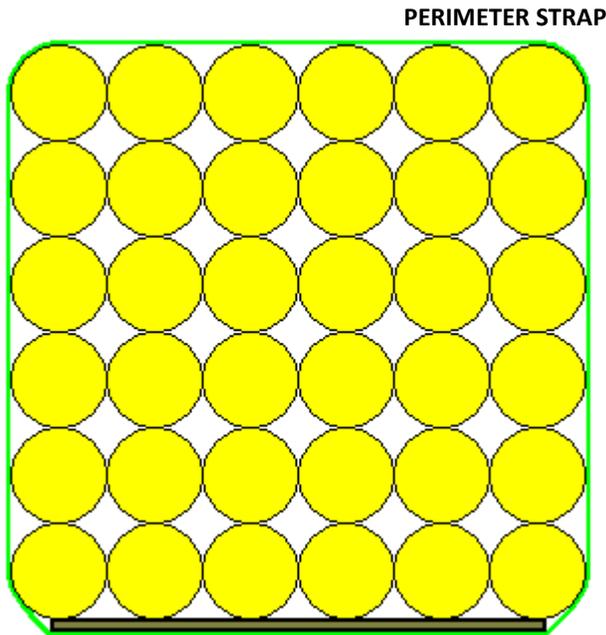
These instructions can be reinforced to train your packaging laborers by posting the drawing below in the packaging area as a reminder and quick reference as they quickly learn these easy skills.

NOTICE – PACKAGER

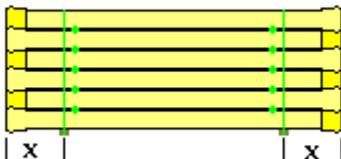
RAGGLESTICKS DO A GOOD JOB ONLY IF THE PACKAGER DOES A GOOD JOB



BOTTOM ROW OF PIPE MUST BE STRAPPED TO THE BOTTOM BOARD. THE REASON FOR THIS IS THAT THE STRAP PREVENTS THE PIPE FROM ROLLING OFF THE BOARD.



THE PERIMETER STRAP MUST BE TIGHT AND NOISY LIKE A BANJO STRING WHEN PLUCKED. THIS GUARANTEES THE PACKAGE INTEGRITY. ADDITIONAL STRAPPING MAY BE NECESSARY, BUT THESE TWO (3) STRAPS ARE THE MOST IMPORTANT. STRAPPING SHOULD BE PLACED AN APPROPRIATE DISTANCE FROM THE OUTER EDGE OF THE PIPE INWARD AS INDICATED BY "X" BELOW ACCORDING TO THE LAYING LENGTH OF THE PIPE. RAGGLESTICK SHOULD BE PLACED 4" TO 6" INSIDE THE PACKAGING STRAPS.



X=36" FOR 20' L.L.

X=45" FOR 14' L.L.

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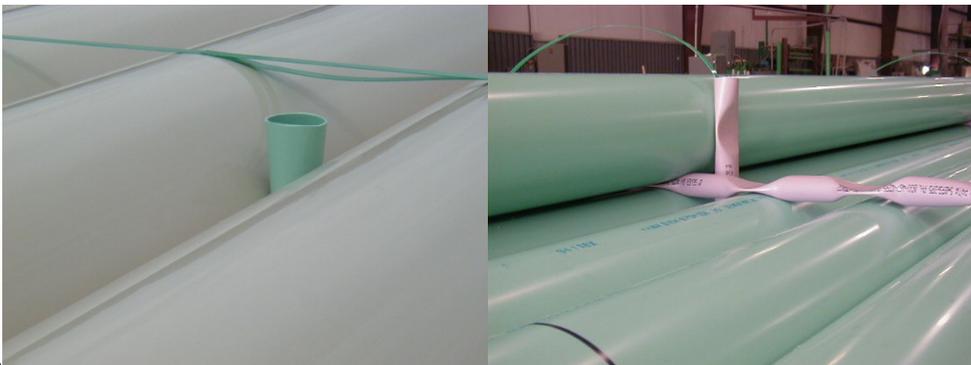
WWW.RAGGLESTICK.COM

8" Gasket Joint 14' Laying Length

LOAD INFORMATION: Package is 6 wide by 6 high, 36 pieces or 468 feet. Twelve packages per truckload

1. Place containment channels on the floor 7' to 7 ½' apart parallel to each other.
2. Place a base stick on the outside of each containment channel.
3. Place first layer of pipe on containment channels.
4. Place a strap around the first layer and under the board to secure the layer to the board
5. Place a plastic ragglestick directly over each containment channel and a layer of pipe
6. Place ragglestick above and just to the inside of the notched base stick
7. Repeat step 5 until the desired number of layers is in the package
8. Do not place a ragglestick or a top board on the top layer.
9. Place two half ragglesticks in a vertical position between the top layer and the layer or two adjacent to the top and positioned just inside the strapping location on each end. This gives horizontal stabilization to the package and limits round up on the top packages of a truckload, by locking the top layer to the layer underneath.

The use of vertical ragglesticks strategically placed in the top two or three layers as described above can be used on other large diameter packages. See photos below



Ragglesticks allow versatility in packaging



To see a video of package construction, click on: https://youtu.be/fmTq_-zvojE