

# Sausage Casings, Speakin' The Lingo, and Vertical Stuffers!

From a post by Chuckwagon on [February 25, 2015 at 22:18](#)

There are **four general categories of sausage casings**:

1. Natural Casings
2. Collagen Casings
3. Fibrous Casings
4. Synthetic Casings

## **1. Natural Casings**

Natural casings are usually supplied in a sealed bag in a moist salt solution and are made from the submucosa ( layer of loose connective tissue beneath the mucous membrane), a largely collagen layer of the intestine. A sausage maker uses what is needed then re-seals the remainder in a re-sealable bag for storage (usually provided by the retailer. Re-sealed casings can be stored for months in the refrigerator. Any natural sausage casing enhances and complements the natural juices and quality of the meat and spices in a sausage. Natural cases also permit deep smoke penetration.

Beginners usually start with hog casings as they are easier to work with than the more expensive, delicate, sheep casings and produce a good thick sausage. Hog casings should be soaked in water for 30 minutes to an hour prior to using. Many types of sausage use only hog casings and the recipe usually specifies the size (diameter). However, it is generally accepted that sheep casing give the best flavor and appearance to a final sausage product. Sheep casings produce a very delicate thin sausage with a perfect "bite" or "snap". However, care must be taken not to overstuff them. Once you get the "feel" for stuffing sheep casings, you'll find using them is well worth the effort. These casings should be rinsed and soaked in water for 30 minutes to an hour before using them.

## **2. Collagen Casings**

Collagen sausage casings are made from the gelatinous substance found in the connective tissue, bones and cartilage of all mammals – the same substance used to make Jell-OTM – the famous gelatin dessert. Most commercially purchased sausage in the USA is stuffed into collagen casings.

Collagen casings are acceptable in all sausage preparations and applications, including freezing, deep fat frying, grilling and oven baking. Supplied on a shirred stick, the sausage maker uses the amount needed for each application, preserving the remainder in a refrigerated, dry, package. These casings are never soaked and are stuffed dry.

## **3. Fibrous Casings**

Fibrous sausage casings are made from wood cellulose (essentially paper) permeated with protein. Fibrous casings are inedible and are the toughest casings produced. Sausage in fibrous casing may be smoked and are used where maximum uniformity and strength is desired. They do not require refrigeration.

#### **4. Synthetic Casings**

Synthetic sausage casings are made from *alginate*\*, and the casings themselves require no refrigeration. Synthetic casings are used by mass producers and can be made in different colors. They are the most uniform and strong of all types of casings.

\**Alginates* are refined from brown seaweeds. A wide variety of brown seaweeds of the phylum Phaeophyceae are harvested throughout the world to be converted into the raw material commonly known as sodium alginate. Sodium alginate has a wide use across a wide variety of industries including food, textile printing and pharmaceutical. Dental impression material utilizes alginate as its means of gelling. Alginate is both food and skin safe.

#### **Speakin' The Lingo**

Hog casings (upper intestines) are sold in 91-meter lengths cut into "hanks" 1 to 2 meters long and gathered into bundles called "shorts". Their average diameter is about 35 millimeters and may be used for cooked sausages, pepperoni, Italian sausage, Kielbasa, Kishka, larger franks, and a host of other stuffed sausages.

Hog middles (middle intestines called "chitterlings") are curly in appearance and cut into one-meter lengths, sold in bundles of nine or ten. They are available in wide, medium, or narrow calibers, determined by the location of the item within the animal. Middles are ideal for Braunschweiger, liver sausages, dry salami, and Italian salami. Hog bungs (called "fat ends") are the intestine's extreme southern end of a north-bound pig. Bungs are sold individually and are used primarily for liver sausage and Branschweiger, Genoa salami, Thuringer, and summer sausage. Diameters vary from 55 to 90 millimeters.

There is no real "trick" to handling the stuff, but there are a few things that may help. First, you need a large, washable, work surface or table. It's best if it has a small tilt to drain water, and even better, a sink in it. Stainless steel is ideal but expensive. If you go to the plumbing and hardware shop, you can get all sorts of ideas for making your own nozzle for quick loading of casings. I have a slippery plastic "gooseneck" rising straight up from a sink in the table. The pipe is reduced to 3/4" and rises a foot and a half then makes a u-turn before being cut off, leaving plenty of workspace. A custom pointed nozzle (I made myself) fits on the end.

When a "short" of hanks is removed from the cooler, I place it in a plastic bucket of water to help with the handling of the thing and to find ends. I pull the ends up over the edge of the bucket until I need them. Next, I trim the ragged ends squarely with a pair of scissors. This makes for easy loading onto the nozzle.

I've found that if I keep a small open bowl of salt on the table, I can dip my forefinger and thumb in it to help with the handling of the casings when laying them out on the table. I place another plastic bucket into the table-sink and fill it with water. I place only one casing at a time into it while a small stream of water straightens it out in coils in the water. This is the time to loosen and straighten any knots or twists – while it's filled with water – IN the water. You may have to turn off the flow for a moment or two while you straighten them out so as not to “blow out” a casing.

A little practice makes this operation much easier, believe me. Have a little patience and practice by making lots of sausage. When the water reaches the end of the casing and flows out, I increase the flow and flush out the salt thoroughly. I've heard of people flushing their casing for as much as 30 minutes but I believe that is much too long. Just be sure they are flushed cleanly and are free of salt. My stuffer swivels to the sink for easy loading but I still start by filling a water “bubble” inside each casing so it lubricates the nozzle as it slides on. The bubble of water stays in front of the stuffing horn as the casing slides onto the horn. I never use butter or any other “lubricant” as this will cause “smearing” and problems with texture later in the smoker. If you are not near a sink, you may have to use a dish of water to start your bubble.

Just one more suggestion if I may. I've said this before but I'll say it again, as I believe it is really important. *Use a vertical, geared, stuffer to stuff your sausages.* You'll never realize just how much work this little gem will save you in the long run. A 5-lb. basic, no-frills, vertical, model, currently sells for about 125 bucks and has a stainless steel cylinder and chrome-plated frame.

Some models have nylon gears, but in my opinion, if a prudent person stops cranking when the piston hits the bottom of the cylinder, it will last indefinitely. I checked with the manufacturer and learned that the material is called, “resin comp”, and it is most reliable. I've used one of these for years and still use it when making smaller batches and found it to be a top quality product. I believe you should look at a stuffer as an investment. It will save much time and even more effort! In the long run, it will pay for itself and prevent you from using foul, abusive, and infelicitous language around the kitchen, unbecoming of a high-caliber sausage maker like yourself! It might even possibly save your marriage!

One last thing... please don't waste your money on one of those curved “horn-type” stuffers. It requires three men and a boy just to pull the lever down... and your language will go from bad to worse. Why, I've seen full-grown men throw a fit right in their own kitchen, just trying to pull that handle down. Soon, a blue cloud of language hangs over the house and the police are called in. The wife starts packing her bags and the poor sausage stuffin' cowboy is taken away in a straight-jacket muttering all sorts of indecent, incoherent syllables with inappropriate 4-letter words. So, play it safe and just tell her that all the folks on this forum are urging her to give you the go-ahead on a VERTICAL (geared) stuffer.

Best Wishes,  
Chuckwagon