

PROPER CONTAINERS FOR LONG-TERM STORAGE

The container you choose is extremely important and will determine how long your food will remain preserved. The very best containers are those used for canning (mason jars) and metalized Mylar bags because oxygen cannot go through metal or glass.

Oxygen will go through plastic, but at different rates. Many plastics are like a screen door for oxygen, (like a sandwich baggie) but a few plastics (like those labeled PETE or HDPE) are good barriers for years. Still if you want the best protection, use a Mylar bag inside any plastic container you are using.

Mylar bags MUST be heat-sealed to be effective. Some have a zip-seal for temporary convenience, but they still must be heat-sealed for long-term storage.



WHAT IS MYLAR ?

Mylar is a transparent film of incredible strength and there are many kinds of Mylar films. For food storage, the film is metalized to enhance its oxygen barrier properties. Many people think that because a bag is thicker, it is better. But the quality and thickness of the metal layer is actually what is important when storing food long-term.

CHOOSING THE RIGHT ABSORBER SIZE

It is always a good idea to use a little overkill on absorption. For one thing, food types can be deceiving. As you can see in the chart, flour can be 50% air! You need to account for this air. Also, if there is a tiny leak in your seal, extra absorbing power continues to suck up any incoming oxygen.

Still, you can feel secure in the fact that OAPs from PackFreshUSA® come with a security buffer allowing them to absorb 180% of their rating or more.

| Absorption Required For Common Foods | | | |
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| What matters is the air volume in the container after you have filled it. That depends, not just on the container size, but on the shape of the food particles and how tightly they are packed. ¹ When using a bag that can form around the food, you can get away with less absorption than with a rigid container like a mason jar. | | | |
| Container Size (Fill completely) | Pinto beans, red beans, rice (35% air) | Flour, flax meal, instant mixes, powders, coffee beans (50% air) | Pasta, cereal, instant potatoes, oatmeal, barley, dried corn (75% air) |
| 1 Pint (16 oz.) | 50cc | 50cc | 100cc |
| 1 Quart (32 oz.) ² | 100cc | 100cc | 150cc |
| 1/2 Gallon (64 oz.) | 150cc | 200cc | 300cc |
| 1 Gallon | 300cc | 400cc | 500cc |
| 5 Gallon | 1400cc | 2000cc | 2500cc |

1. Food items like flour do not contain less air just because they have small particles.
2. PackFreshUSA "Quart" bags are actually much larger than a quart, so we include 300cc OAPs in quart sets.



USING OXYGEN ABSORBERS WITH MYLAR BAGS

For more detailed directions, food storage ideas, printable checklists, and tips, please visit PackFreshUSA.com!

1. PREPARE a clean working area and read all directions first. Then, gather your materials before opening the Oxygen Absorbing Packets. (OAPs) You should limit the OAP air exposure to 10-15 minutes, so don't open them until you are ready. But don't worry, you have closer to an hour before they will not absorb their full capacity, so you have plenty of time. You may want to label your bags first using a permanent marker to record the date and contents. Consider grabbing a scoop and/or funnel to make filling easier, and wipe off any dust or debris from inside the bags where they will be heat-sealed.

SMALLER BAGS (QT., GAL.)



2. PLACE THE BAGS in a rigid bucket or box to prop them upright.



3. FILL THE BAGS carefully, leaving plenty of room to heat-seal them. (4-5 inches) It is best to fill all your bags before proceeding to Step 4.



4. OPEN THE OAPs and place one in each bag with the food



5. Push as much air from the bag as possible and HEAT-SEAL THE BAGS using one of these 4 methods:



a. An impulse sealer



b. A household iron set on the hottest setting (with steam off)



c. A hair-straightening iron (some cordless models may not get hot enough)



d. A vacuum sealer machine set to "seal" (you can turn off the vacuum)

5 GALLON BUCKET



2. LINE EACH 5 GALLON BUCKET with one of the 5 gal. bags. If you are not using buckets, a rigid container will still help prop them upright.



3. FILL THE BAGS carefully, leaving plenty of room to heat-seal them. (4-5 inches from the top of the bucket) It is best to fill all your bags before proceeding to Step 4.

4. PARTIALLY HEAT-SEAL EACH BAG, leaving a 6 inch opening. (to insert the OAP in Step #5) Use one of these 3 methods:

- a. An impulse sealer like a "hot jaw"
- b. A household iron set on the hottest setting (with steam off)
- c. A hair-straightening iron (some cordless models may not get hot enough)



5. OPEN THE OAPs and place one in each bag with the food. Then push as much air from the bag as possible and seal the opening.



STORING UNUSED OXYGEN ABSORBERS

If you are not using all of the OAPs in a package, you can reseal the ones you are not using. It takes close to an hour of total exposure to air before an OAP will no longer absorb its full rating, but reseal them ASAP to retain their absorbing capacity. A mason jar is often the best choice. You can also vacuum-seal them or heat-seal the bag they come in using an iron or sealer. A sandwich baggie or zip-seal bag will not work.

OXYGEN ABSORBER FRESHNESS TEST

If you are opening a factory-sealed, undamaged package, then these steps are mostly for your peace of mind. OAPs do NOT suck all of the air from the Mylar bag (just the oxygen) so it is normal to feel "air" in the bag afterwards. If you are looking for a confirmation test, you need to do that prior to sealing the bag. But it is important to know that OAPs are actually a very simple technology and they do not "fail".

1. A new package will be vacuum-sealed. Air could not have entered unless the package was damaged and it is no longer under vacuum.

2. Oxygen indicator should be a reddish/pink color BEFORE you open the absorber package. (it will turn dark blue seconds after you open the pack)

3. Absorber should feel soft like it contains a fine powder like flour. (AFTER you open the pack) An exposed one feels hard, crunchy or solid. If you get a chance, leave one out for 24 hours to feel the difference.

COMMON ISSUES AND TROUBLESHOOTING

Mylar film is actually transparent. A metal layer has been added to enhance its barrier properties. Normal use will cause scratches or breaks in this foil layer, **but these are not holes** and will not effect the performance of the bag.

OAPs may release heat as they work (but you will likely not notice)

Do not expect all the bags to have a vacuum-packed look! Oxygen is only 21% of air so 4/5ths of the air will remain. Yes, you often see this look, but especially food with high interstitial air volume will often not get this look, even though the process worked and the oxygen is gone.

OAPs are non-toxic, but keep them out of reach of kids and pets.

Peace of mind is vital when it comes to food storage. Please contact us if you still have concerns.

TIPS

When storing food for emergencies, keep in mind the present likes and needs of your family. Plan variety in your meals and include desserts and your favorite spices. Consider creating a menu and store meal items together.

Instead of using a 5 gallon bucket to store only one item, use the container to hold several smaller bags of different items. Smaller amounts are more convenient when it comes time to use them, and you won't need to unseal more than you need.

You can keep food in its original packaging, but if you do, poke a tiny hole in the package so that the oxygen will be removed.

You may want to include prep directions, utensils, or other materials you will need.

Rotate your food supply by using it and replacing it. Proper use of oxygen absorbers with appropriate, properly sealed containers can keep food safe for decades, but it is a much better idea to keep a rotation going than to push the limits of your food storage system.

Do not forget about pet food. (You may want multiple smaller bags instead of one large container) Coffee, vitamins and seeds to grow food are other items to remember.

STORAGE AND FOLLOW-UP: Your food is very well-protected and safe to store just about anywhere, but it is best to store your bags in a rigid storage container, in a cool location, at least 6 inches off the ground. **Only oxygen will be absorbed! Air has other gases, so don't expect all the air to be sucked from the bag!** It takes up to 48 hours for all the oxygen to be absorbed, but most of it is gone in just a few hours. Oxygen absorbers are extremely reliable and used in many commercial products; they do not "fail". See the TROUBLESHOOTING section if you have concerns or feel free to contact us.