



## What is Mylar?

Mylar is a registered trademark owned by Dupont Teijin Films for a specific family of plastic sheet products made from the resin PolyEthylene Terephthalate (PET). The polyester film/plastic sheet is manufactured in a range of different styles, finishes and thicknesses.

Whilst at first glance it is a light, flexible and thin material, it is also strong and durable. Mylar is used in a variety of applications including window films, high atmospheric helium balloons, solar filters, medical devices, LCD/Plasma/Computer displays, photographic printing, emergency space blankets, insulators and more.



## Why use Mylar Bags to store food?

Mylar has several properties that make it an ideal companion when wishing to store food long term. The material has a high tensile strength, is flexible and exhibits isolating barrier properties. Or in layman's terms, Mylar bags are strong, light and tight.

**High tensile strength.** Mylar is strong. When filling and sealing bags, there is little risk they will tear due to the bags weight or contents. They are also highly durable and resistant to punctures.

**Light and flexible.** Mylar Bags are pliable and able to conform to its contents and able to collapse when oxygen is removed.

**Sealable.** Mylar provides an effective non-porous barrier to the outside elements. Isolating the contents from oxygen, humidity and light exposure are key to ensuring the longevity of the contents.

Mylar Bags offer a cost effective, easy to use solution for preserving your items.





## Using Mylar Bags for food storage

When investing in Mylar Bags it is important to choose wisely – as the decisions you make now will impact how successfully your items will be stored.

The two factors to consider are **size and thickness**.

Smaller bags are a great solution for the smaller food items you don't wish to store in bulk quantities, such as spices, baking powders, salts, dehydrated meats and fruits. Larger bulk items such as rice, grains and beans lend themselves to the larger bags. Bear in mind, that you'll still be needing to lift the bags when full.

The thicker the bag, the better the Mylar Bag is at protecting contents from moisture and light. The trade-off is that thicker bags are more expensive and as they are stiffer are less likely to mould to your contents. It is also recommended that you use gloves when handling thicker Mylar Bags given they can be quite sharp.



## The language of Mylar Bags

In researching Mylar Bags you will have come across references to 'mils' or 'microns'. These units of measurement describe the thickness of the Mylar material. The micron ( $\mu$ ), is a unit of length that is equivalent to one millionth of a metre, whilst a mil is one thousandth of an inch.

**1mil is equal to 25.4  $\mu$**

Typically Mylar Bags come in a range of thicknesses from 89  $\mu$  to 178  $\mu$  (or 3.5 mils up to 7 mils).





## Use with Oxygen Absorbers

Before sealing your Mylar Bag, it is important to add oxygen absorbers to the contents of the bag. Oxygen Absorbers or scavengers remove the oxygen from the void of the Mylar Bag.

Removing oxygen from the Mylar Bag extends the shelf life of the Mylar Bag contents. Damage from the effects of oxygen can present in the form of changes to flavour, colour, smell, texture, mould and spoilage. Oxygen Absorbers trap oxygen.



Given that air comprises 20% oxygen and 80% nitrogen, the absorber will remove the 20% of the atmosphere that is oxygen. The volume of nitrogen remaining results in the bag deflating though not to the extent the bag becomes hard or rigid.

## How many Oxygen Absorbers will I need?

Calculating how many oxygen absorbers are required is based on isolating the volume of void space in a sealed bag. The formula is:

$$\text{Oxygen Volume (CC)} = \text{Sealed Package Dimensions (cm): (Length x Width x Depth)} - \text{Food Weight (g): contents only} \times 20\%$$

Alternatively head over to our online calculator at [pro-ex.com.au/oxygen-absorber-cc-calculator](http://pro-ex.com.au/oxygen-absorber-cc-calculator) for an instant result.

Oxygen Absorbers come in a variety of sizes from 30cc to 500cc. It may be that you need multiple sachets, but in general, it is better to round up than down.





## What can be stored with Mylar Bags

Any dry, low-fat food can be stored in Mylar Bags. That means things like dehydrated fruits and veggies, Flour, Grains, Pasta, Sugar, Dried beans, Powdered milk, Cereal and Spices and Herbs are ideal candidates to be stored for greater than 5 years..

Other foods can also be stored in Mylar Bags, however given their moisture and fat content should be rotated through more regularly. The below list details approximate Mylar Bag storage timeframes.

### Less than 1 year:

- Nuts
- Crisps or chips
- Chocolate or lollies
- Brown rice
- Coffee
- Medicine
- Powdered Supplements



### Between 1 and 3 years:

- Dehydrated meat, e.g. biltong or beef jerky
- Yeast
- Dry biscuits
- Pet food (depending on moisture content)
- Crackers

### Between 3 and 5 years:

- Baby milk/formula
- Cornmeal (maize flour)
- Herbs (ground)
- Powdered milk (full-fat)
- Sprouting seeds





## Between 5 and 10 years:

- Alfalfa
- Gluten
- Granola
- Herbs (whole)
- Millet
- Mung beans
- Quinoa
- Peppercorns (whole)
- Peanut butter powder
- Powdered milk (semi-skimmed)
- Powdered egg
- Rye
- Unbleached flour
- Wheat flakes

## Between 10 and 20 years:

- Black turtle beans
- Black-eyed peas
- Buckwheat
- Butter/margarine powder
- Chickpeas
- Cocoa powder
- Durham wheat
- Flax
- White flour
- Wholewheat flour

## Between 20 and 30 years:

- Coffee (instant)
- Freeze-fried fruit and vegetables
- Hulled oats
- Kidney beans
- Lentils
- Lima beans
- Noodles
- Pasta
- Pink beans
- Powdered milk (skimmed)
- Rolled oats
- Tea (bags or loose)
- White rice

## Indefinitely:

- Baking soda/powder
- Honey
- Salt
- Sugar

## Mylar Bags and Non-Food Items

- Jewellery
- Screws
- Certificates
- Photographs
- Bath Salts/Scrubs
- Artwork





## Sealing your Mylar Bag

Mylar Bags can be sealed in two ways. The first is the resealable variety that requires no further tools other than your nimble fingers and a clean seal. Squeeze the air out of the Bag as you close the seal firmly. If wishing to store items longer term, then follow this with heat-sealing the top of the bag with an iron. Once the bag is open the resealing mechanism is also great for closing the bag while you use the contents.

Alternatively, or with the resealable mechanism, a heat source (clothes iron, hair straightener or Mylar Bag Sealer) can be used to fuse together the sides of the Mylar bag to form a seal. When using this method, it's important to make sure the seal is completely void of dust and debris. Wrinkles can become a seals' weak point if not flattened out and too much or too little heat can result in holes or a fragile seal that does not stand the test of time.

## Food Storage Tips

**Do your homework and be prepared.** Oxygen Absorbers start working immediately. Once opened they begin to scavenge oxygen and their effectiveness begins to reduce. It's important to therefore work quickly and when not in use Oxygen Absorbers should be stored in a sealed package.

**Label. Label. Label.** Rather than risk losing track of what has been packed, we can not recommend highly enough that in this case more information is best. A sharpie pen can do the trick (so long as you let the ink dry) or else use a labelling machine. Information should include pack contents, date it was packed as well as keeping a record of the original food packaging.

**Mylar Bags can be re-used.** Washed and thoroughly dried Mylar Bags can be used multiple times. Bags that have been heat-sealed can have the fused seal, cut off and a new seal formed below it. Larger bags lend themselves to this technique as the bags get progressively smaller.

