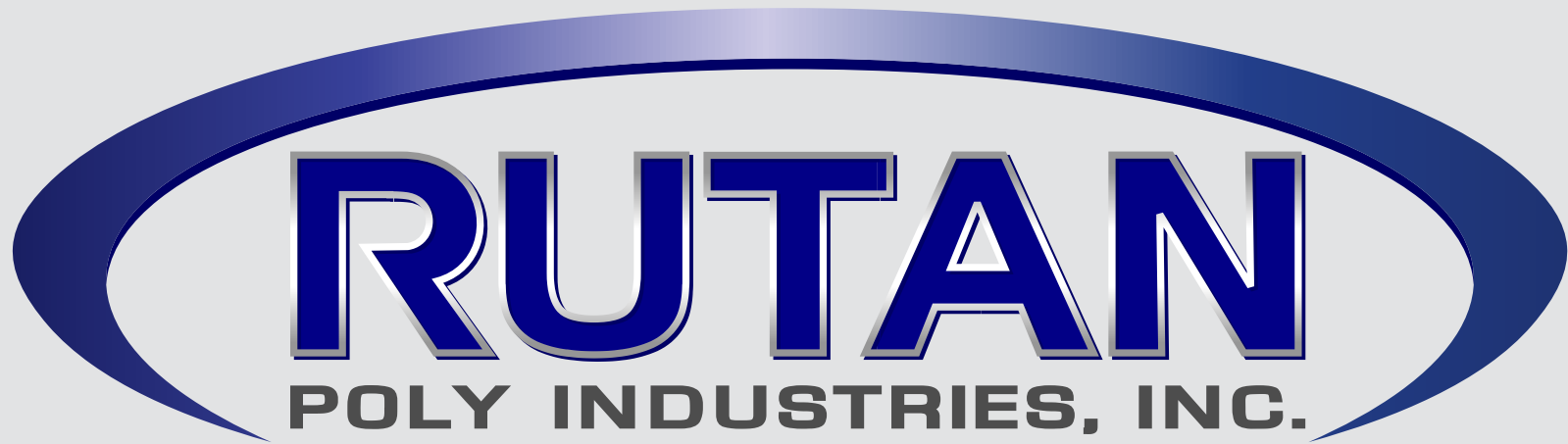


EVERYTHING  
YOU NEED  
TO KNOW ABOUT  
**PLASTIC BAGS**



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## INTRODUCTION

Nowadays, consumers have become unwittingly hooked on plastic bags, and for good reason: these plastic bags can be used for multiple purposes such as storing extra necessities while travelling, wrapping food, and to hoard dirty or wet clothes. In simple words, a world without plastic bags would be incomplete.

How would people be able to carry things around? How will shop owners sell their products without plastic bags? You see, these bags have now become an important part of our daily lives. Their versatility, durability, strength, and variety of uses prove to be incredibly beneficial for us consumers.

Research shows millions and trillions of plastics bags are churned out each year by hundreds of companies year-round to meet our increasing demands. Therefore, plastic bags are indeed a necessary part of our lives.

Without even realizing it, we have made them kind of a daily requirement, be it for any work or purpose. However, not only do these bags prove useful for household purposes, but they also play an important role in huge factories and industries and are used to store the tiniest of things to the largest.

From garbage bags, sealing bags, tie-on bags, self-sealing bags and many more are all used daily in industrial areas. Not to mention, many food items that are available nowadays come in a wide variety of plastic bags, each suiting a different purpose and having its own unique quality.

In this eBook, you will learn everything about plastic bags from its history, to how they are made, to their uses and myths.

# RUTAN

POLY INDUSTRIES, INC.

## THE HISTORY OF PLASTIC BAGS

Patent applications that are relevant to the manufacturing of plastic bags date back to the early 1950s. However, these bags were used in industrial processes, particularly for composite construction. The modern-day shopping bag we all know and use today was invented in the early 1960s by Sten Gustaf Thulin, who was a Swedish engineer.

He developed a method of creating plastic bags for a Swedish packaging company, Celloplast, which consisted of folding, welding and die-cutting a tube of plastic. Thulin's design effectively produced a plastic bag that was simple, tough, with a good carrying capacity, and was introduced to the world in 1965 by the same company he developed it for.

Situated in the city of Norrköping, Celloplast was a renowned manufacturer of cellulose acetate film (also known as safety film) and a pioneer in the techniques of plastic processing. The strong position of the company gave it a virtual monopoly on the production of plastic bags due to which manufacturing plants were set up by the company across the US and Europe.

Nevertheless, it wasn't long until other companies realized the potential of the plastic bag, and Celloplast's patent run in the US was overturned by its leading petrochemicals company, Mobil, in 1977.

In the 1980s, the marketing, perfecting, and manufacturing of plastic bags reached massive heights, with companies such as Capitol Poly, Houston Poly Bag, and the Dixie Bag Company playing instrumental roles. So much so, several leading grocery chains, such as Kroger and Safeway, began replacing their paper bags with plastic shopping bags.

Losing its monopoly on the production of plastic bags, Celloplast faced a hard time in rejuvenating its declining business, which led to the company being split up in the 1990s. The site in Norrköping is still a major production site for plastic in Sweden, but is now headed by the company Milijosack, who as the name states, is a manufacturer of waste sacks.

Since the mid 1980s, the use of plastic bags in numerous applications has become quite common in countries all around the world. Whether it's carrying groceries from your vehicle to your home, or getting take-away from your favorite restaurant, plastic bags are playing an important role in many aspects of our lives!

So, now that you are well versed with the history of plastic bags, let's move on to the next chapter, shall we?







## WHAT ARE PLASTIC BAGS?

When you go shopping at a supermarket to purchase your groceries or kid's birthday present, do you get a bag for the packaging of your items? Yes, you do! And it is likely that every time it would be a plastic bag. So, what are plastic bags made of?

Well, there are several types of plastic bags available today, and they are made from different types of materials. Most of them are made of polyethylene, which is derived from crude oil and natural gas. Some are made from degradable polyethylene film, while some are made from plant materials.

Nevertheless, regardless of the type or material they are made of, the convenience of plastic bags has made their use common in virtually every aspect of life. And why wouldn't it be? They are a lightweight, cheap, strong, functional, and hygienic way to transport products. They have become so popular that it's hard to believe they have only been around for a generation!

But, plastic bags are also perceived to be unfriendly for the environment. We will be discussing more of this in a later chapter. However, it must be said that it is easy to overlook the advantages due to this perception.

While they may have certain ecological drawbacks, especially if used irresponsibly, plastic bags offer numerous advantages for consumers, retailers and even the environment.



## ✓ ADVANTAGES OF PLASTIC BAGS FOR RETAILERS

Plastic bags have been favored by retailers for as long as they have been available. That is mainly because they are convenient to store, cost-effective and easy-to-use. In bulk purchases, plastic bags can be bought at a cent a piece. On the contrary, paper bags usually cost 5 cents or even more, while reusable cloth bags can cost a few dollars each.

There is an apparent overhead cost benefit involved for retailers in purchasing plastic bags as opposed to paper or cloth bags, and this would definitely have a good impact on their profit margins.

Moreover, it is quicker and easier to open and pack with plastic bags. Though a few seconds difference may seem to be nominal, in busy supermarkets, it can help cashiers efficiently keep the lines moving.

Plastic bags do not require much space either when compared to paper bags, both at cashier stations and in storage, while their weight is not much of a concern either. Reusable bags, on the other hand, take a lot of space and are significantly heavier.

## ✓ ADVANTAGES OF PLASTIC BAGS FOR CONSUMERS

Just like retailers have found plastic bags a much better option than reusable or paper bags, so have consumers. A survey by the US Environmental Protection Agency indicates more than 100 billion plastic bags are used by Americans annually while only 10 billion paper bags were used according to the estimates of the American Forest and Paper Association.





**Though pressure from environmental groups has somewhat affected this preference and increased the usage of reusable bags, there are still a two benefits offered by plastic bags:**

1. Plastic bags can be reused for several purposes, such as for the storage of miscellaneous items or lining of trashcans. They can even be repurposed and rinsed out, and last significantly longer than paper bags.
2. In comparison to paper bags, plastic bags are more durable, making them easier to carry, useful in the rain and less prone to tearing.

## THE ECOLOGICAL IMPACT OF PLASTIC BAGS

There has been a lot of debate and discussion over whether plastic or paper bags are unfavorable for the environment. That's why jumping to conclusions would not be appropriate. However, what we can do is compare the obvious advantages and disadvantages of both:

### ECOLOGICAL ADVANTAGES

Plastic bags offer several ecological advantages over paper bags. They weigh a lot less and their contribution as waste to landfills is significantly less, especially when they are recycled.

Furthermore, as stated by the EPA, 40% more energy is required to manufacture paper bags as opposed to plastic bags, which means paper bags are contributing a lot more towards air pollution. Apart from this, the manufacturing of paper bags also causes 50% more water pollution.

### ECOLOGICAL DISADVANTAGES

Paper bags are manufactured from trees, which is a renewable resource. However, the main ecological disadvantage of paper bags is that it's made from a non-renewable resource: petroleum.

Additionally, plastic bags can break down into contaminating particles over the years. That's because plastic is not biodegradable. However, recycling has solved this problem to a large extent.

### EFFECT ON MARINE LIFE

So, it is likely you might have heard about the most convincing argument against the use of plastic bags. And that is its effect on sea life. It has been said repeatedly that several maritime creatures consume plastic bags, mistaking them for food, due to which 1 million sea birds and 100,000 marine animals die annually.

However, this is nothing more than just a myth, which originated from a 2002 study about plastic bags that was commissioned by the government of Australia.





## DIFFERENT USES OF PLASTIC BAGS

Plastic bags can be used in a variety of applications. To think of it, these bags are pretty ordinary items. They don't cost you much and neither do they look like anything special. However, they have extraordinary uses all-around and can be reincarnated in a thousand different ways.

Some of their uses can be extremely useful, while some completely funny. Nevertheless, they can help you store a number of everyday items, while costing you nothing. So, what do you use plastic bags for?

### ✓ FOR STORAGE

#### STORE YOUR CLOTHES

If your closet is overstuffed, but your dresser has plenty of room to spare, why not conduct a clothes transfer? Fold your clothes and place them in plastic bags. This will keep your clothes wrinkle-free until you are ready to wear them again.

#### STORE ADDITIONAL BABY WIPES

Storing baby products beforehand is the norm when it comes to taking care of babies. So, you pick a box of baby wipes at a good price, and already have enough to last you months. Don't let them go to waste by letting the wipes dry out before you can use them! To protect the wipes, open up the box and place it in a plastic bag. Don't forget to seal it from the top.

#### COVER CLOTHES FOR STORAGE

Protecting your expensive suit from dust can be quite a difficult task. So, grab a large, unused plastic bag, make a hole at the top, push the hanger through, and there you have it: instant dustcover.

### ✓ IN THE KITCHEN

#### BAG THE PHONE

It's always difficult to answer the phone when you are in the kitchen, particularly when your hands are a complete mess. So, whenever the phone rings, wrap your hands in a plastic bag and answer. Neither will you miss your call, nor will you need to clean the phone after you are done.

The authors of the report misquoted a Canadian study that was published 15 years earlier, in 1987. The vast number of marine animal deaths cited was actually caused due to fishing nets and lines.

As you can see, plastic bags aren't really that disadvantageous. All you need to do is recycle them carefully. We will be discussing a lot more about this in depth later on. Until then, let's move on to the next chapter where we will be highlighting the different uses of plastic bags. There are a lot more uses than you might know, but we will mention as many as possible to give you a better idea.



## COVER A COOKBOOK

When you are trying a new recipe from a cookbook, you wouldn't want anything to splatter or spill over it while you are working on it. Therefore, get a clear plastic bag and cover your book with it. The book will stay clean and you will be able to easily read the instructions too.

## REPLACE A MIXING BOWL

Short on mixing bowls? That tends to happen whenever cooking for a large number of people. However, you can use a plastic bag in its place. All you need to do is place the dry ingredients into the bag and shake them gently. On the contrary, if the ingredients are wet, you can use your hands to mix them.

## ✓ KEEPING THINGS CLEAN

### LINE THE LITTER BOX

Why change your cat's litter box when you can make the job quick and easy? Use an open plastic bag to line the box and then pour in the litter. Next time around, you will only need to remove the bags and throw them in the trash instead of changing the litter box.

### PROTECT HANDS WHEN CLEANING THE TOILET

Whenever you are cleaning your toilet with brushes or short tools, don't forget to protect your hands from germs. This can easily be done by wrapping your hand in a plastic bag, which will allow you to properly scrub your toilet without getting your hands dirty in the process.

### KEEP POLISH OFF YOUR HAND

So, you want to thoroughly polish your sandals. However, it is likely you will get more polish on your hands and lesser on your shoes. Therefore, grab a plastic bag and wrap it on your hand before polishing. This way, your hand will remain protected when the polish runs off the straps of the sandals.

## ✓ AROUND THE HOUSE

### KEEPING MATTRESSES DRY

Is bed-wetting a common problem in your house? Then no need to buy costly mattress guards! Instead, take a few unused plastic garbage bags, and line the mattress with them.



## STUFF PILLOWS OR CRAFT

Items like plastic beads, beans, fabric filler and rice are commonly used to stuff a craft project. However, have you ever thought about using plastic bags to stuff your craft items and throw pillows? Since you have ample plastic bags available, you really won't have to worry about running out. And, you are recycling too!

## TREAT DRY HANDS

An effective way of treating scaly and dry hands is by rubbing petroleum jelly on them, and placing your hands in a plastic bag. Your hand will become supple in around 15 minutes due to the warmth of your body and the jelly.

## ✓ IN THE YARD

### STORE OUTDOOR EQUIPMENT MANUALS

Your lawnmower is giving you problems. Now, what you do? Take a look at the owner's manual of course. So, whatever outdoor equipment you are using, stash their warranties and owner's manuals in a plastic bag. Once you do, keep it somewhere easy to reach in your garage. You will know where to look for help the next time.

### CLEAN A GRILL

After a barbeque, the grill can become quite a sorry mess! And cleaning it is even harder. Therefore, place the racks in a garbage bag, spray cleaner on the grill, and firmly shut the bag. After a day, open up the bag, while you protect yourself from the fumes. All the junk that is burned-on should wipe right off.

### PROTECT FRUITS ON THE TREE

Are there some plums or apples in your orchard that require more time on the tree? Get a plastic bag and slip the fruit into it while still on the tree. This will protect your fruit from critters until they have finally ripened.

## ✓ ON THE MOVE

### PACK YOUR SHOES

When you are travelling abroad, shoes for all types of occasions need to be packed. However, it can also get things dirty in your suitcase. So, get a few plastic bags, and wrap each pair into them. This way, not only will you be able to pack complete pairs, but you will also manage to keep the dirt of your clothes!



## PROTECT YOUR HAND WHILE PUMPING GAS

Depending on the amount of gas you want to put in your tank, it can take around 5 minutes to be in and out of the gas station. However, that is more than enough for people to contract germs from the handle. Therefore, use the plastic bags you have in your car, and wrap it around your hands while you pump.

## PROTECT YOURSELF IN THE RAIN

It's time for your early morning jog, but there's light rain, which can get you wet. So, get a large, unused plastic bag, slash a hole in the top, and wear it to protect yourself in the rain while you jog.

As you can see, not only do plastic bags have hundreds of applications, but they can also be reused in different ways several times. Such is the power of plastic bags. So, don't just throw them, bag them!



## HOW ARE THEY MADE?

So, have you ever wondered how the bags that we heavily rely on are made? Well, as ordinary as they seem, plastic bag manufacturing is quite a complicated process that involves numerous stages.

Though the manufacturing process of plastic bags may vary from company to company, it usually includes several main steps. In the following paragraphs, you will get to know about each of these steps.

**However, before moving on, there are a few terms used by plastic bag manufacturers that you should be aware of, which are as follows:**

- ▶ **Polyethylene** - A type of thermoplastic resin, which is made through the alteration of ethylene gas molecules.
- ▶ **Blocking** - Also called cohesion, blocking is a condition that occurs when extremely smooth or flat surfaces adhere together after they are placed against each other.
- ▶ **Gusset** - These are indentations in the sides of plastic bags, which allow the bag to lay flat when stored, but expand when opened.
- ▶ **Nip Rolls** - Also called pinch rolls, nip rolls are the two motorized rolling pins at the top of the cooling tower, which pulls the poly film up.

- ▶ **Die** – A metal restrictor, mold, or any other channel that allows continual processing of shapes.
- ▶ **Frostline** – The point where molten polyethylene solidifies into a film.
- ▶ **Layflat Form** – This refers to the tubular poly film that has been flattened for further processing.
- ▶ **Extruder** – A pump with a rotating screw that holds thick fluids for their mixing and melting.

Now that you are aware of these various terms, let's move on forward!

**As mentioned earlier, plastic bags are made from polyethylene, which is derived from petroleum and natural gas. A number of additives may be added during the processing of polyethylene, these include:**

- ▶ **Ultraviolet Inhibitor (UVI)** – It protects the plastic, as ultraviolet radiation can cause the plastic to weaken and lose its color.
- ▶ **Anti-Block** – It prevents the layers of the plastic from adhering together.
- ▶ **Slip** – It helps the plastic bag to open easily and allows items to smoothly slide in.

After processing, polyethylene is sent to the manufacturing facility in the form of pellets, which is referred to as resin.

The process starts off with the conversion of plastic film, where polyethylene resin is melted and extruded in the convertors. The color, strength and thickness will depend on the manufacturer, or the customer's requirements. Through the mixing of different dyes (which are also in granulated form) almost any color can be modified.

A film tube, inflated with air, is then produced by the converters. This results in the formation of a bubble, which cools down and solidifies the film. The required thickness of the film is reached at the Frostline. After that, the film is guided by the collapsing boards, where it is steadily flattened and gusseted. The layflat film then passes through the nip rolls, causing the top of the bubble to seal effectively.

The layflat film is fed to the winding equipment through a slitting machine and then finally wound onto rolls. These rolls are then sent to converting facilities, which have a range of specialized equipment to create the various features that characterize plastic bags today.

Over the years, the manufacturing process for plastic bags has not changed much. However, what has changed is the way we are using plastic bags. Whether it's carrying groceries or sealing meat for storage, plastic bags have grown to become a convenience that has made our lives a lot easier.

In the next chapter, you will find out about different types of plastic bags that are available today.





# RUTAN

## DIFFERENT TYPES OF PLASTIC BAGS

Given the number of choices available, choosing the right plastic bag can be a somewhat tricky task. That's mainly because plastic bags are made from different materials and each of these materials offers users specific characteristics. They also come in various mixed shapes and colors.

There are so many versions of plastic bags out there, however, by familiarizing yourself with each type, you can certainly narrow down your choices a great deal and choose the right bag for your needs.

So, let's dive in and take a look at the different types of plastic bags available on the market today:

### HIGH DENSITY POLYETHYLENE (HDPE)

One of the most common plastics used around the world, HDPE features a variety of qualities, which makes it an excellent material for manufacturing plastic bags. It's lightweight, relatively transparent, water and temperature resistant, and has high tensile strength.

Apart from that, HDPE plastic bags meet the USDA and FDA food handling guidelines, thus making them a popular choice for both storing and serving food in take-out and retail.

HDPE plastic bags can be found in restaurants, convenience stores, grocery stores, delis and even in homes for storing and packaging purposes. HDPE is also used for garbage bags, utility bags, T-shirt bags, and laundry bags, among others.

### LOW DENSITY POLYETHYLENE (LDPE)

This type of plastic is commonly used for utility bags, food bags, bread bags as well as bags with moderate strength and stretch properties. Though LDPE is not as strong as HDPE bags, they are capable of storing bulk items, specifically food and meat products.

Moreover, the clear plastic makes it easy to identify the contents, allowing restaurateurs to keep up in the fast-paced setting of commercial kitchens.

That said, LDPE plastic bags are highly versatile and are popular for use with heat-sealing due to their low melting point. LDPE also meets the USDA and FDA food handling guidelines and also is also sometimes used to make bubble wrap.





## LINEAR LOW DENSITY POLYETHYLENE (LLDPE)

The main difference between LDPE and LLDPE plastic bags is that the latter has a slightly thinner gauge. However, the best thing about this plastic is there is no difference in strength, which allows users to save money without any compromise on quality.

LLDPE bags exhibit a moderate degree of clarity and are used for the manufacturing of food bags, newspaper bags, shopping bags as well as garbage bags. They can also be used for food storage in freezers and refrigerators, due to which they are used for the storage of bulk food items in commercial kitchens.

## MEDIUM DENSITY POLYETHYLENE (MDPE)

MDPE is comparatively clearer than HDPE, but not as clear as low-density polyethylene. Bags that are made of MDPE are not associated with a high degree of strength, and neither do they stretch well, thus are not preferred for the carrying or storing of bulk products.

However, MDPE is a common material for garbage bags and is generally used in consumer packaging for paper products such as toilet paper or paper towels.

## POLYPROPYLENE (PP)

PP bags are characterized by their remarkable chemical strength and resistance. Unlike other bags, polypropylene bags are not breathable and are ideal for retail situations due to their longer shelf life. PP is also used for food packaging, where items like candies, nuts, herbs and other confectionaries can be easily stored in bags made out of it.

These bags are comparatively clearer than others, allowing users enhanced visibility. PP bags are also great for heat-sealing due to their high melting point, and, like other plastic bags options, are USDA and FDA approved for food handling.

# COMMON PLASTIC BAG STYLES

Nowadays, So, these are some of the most common types of plastic bag, their features, and uses. Now, let's move further and discuss the main plastic bag styles.

## BOTTOM GUSSET BAGS

These bags fold at the bottom, which allows them to expand into a nice rectangular shape. Bottom gusset bags can be produced in a variety of sizes and shapes too, and are particularly ideal for aesthetic product display.

## SIDE GUSSET BAGS

With gussets on both sides of the bag, side gusset bags have great flexibility in the accommodation of several contents. Ideal for the retail display of small items, the small face size of side gusset bags make them easier to transport and handle.



## GARBAGE BAGS

Garbage bags are used for lining waste containers and bins. Flexible and large, these bags can easily accommodate large quantities of trash and can conveniently be closed, tied and pulled out by its edges.

## T-SHIRT BAGS

One of the most versatile types of plastic bags available, T-shirt bags are made of HDPE and used in a variety of retail situations. From convenience stores, to grocery stores to shopping markets, these bags are used almost everywhere!

## RE-CLOSABLE BAGS

Whether in slide seal or seal top configuration, re-closable bags are typically used for food portioning or storage, where the bag will be opened frequently. These bags can keep products fresh for longer periods of time, thus making them ideal for storing numerous food items.

## HANDLE BAGS

Handle bags are durable and can accommodate a wide variety of items. As the name implies, these bags come with a handle at the top, which makes it easier for users to carry their purchased items.

## LAYFLAT BAGS

These bags come in two main varieties, namely side seal and bottom seal. Side seal bags are ideal for lighter items because they are only sealed from two sides, where the bottom is folded and top is left open for access. Bottom seal bags have pretty much the same design. However, there is no fold.

## NEWSPAPER/DOORKNOB BAGS

Both these bags have a similar narrow design and an opening at one end. The hole on doorknob bags allows promotions, mailers, and newspapers to be hanged. On the other hand, newspaper bags are designed to sustain the elements and do not have a hole for hanging.

## MAILER/SECURITY BAGS

Mailing and security bags are designed to protect items while they are being delivered. These plastic bags are lightweight, water resistant, and save you money on postage. This is because of the added protection and lower cost.





There are several types of mailing bags available for different applications, some of which include:

- ▶ **Security Mailers** – These white opaque mailing bags are extra thick and feature a sealing strip to prevent tampering. There is a side skirt on the welds as well, which provides optimum protection for those top-secret packages!
- ▶ **Tamper Evident Mailers** – A range of tamper evident mailing bags are available in opaque as well as clear forms. They are typically used for bag contents that need to be identified.
- ▶ **Superlight Bubble Mailers** – These are the lightest protective envelopes available on the market today. Superlight bubble mailing bags are available in a variety of sizes and come in silver and white. They are also waterproof, so you do not need to worry about the safety of your package if it's raining.
- ▶ **Metallic High Impact Silver Mailers** – For those who want to create high impact postage, metallic high impact silver mailing envelopes are the ideal choice.
- ▶ **Economy Lightweight Postal Mailers** – These mailing bags are simple, plain, and very affordable. Not only do they provide effective protection to your items, they are also lighter than paper envelopes. Therefore, this makes them easier to carry.
- ▶ **Blue Opaque Mail-Order Goods Bags** – These are ideal for catalogue products and garments. These bags are available in attractive opaque metallic blue. They are durable, without being excessively thick or expensive.

## COMPOSTING BAGS

While plastic bags provide a variety of benefits over other packaging options, it is the way they are disposed that causes problems. The ever-increasing use of plastic bags, accompanied with low recycling levels, causes a significant amount of both land and water pollution.

Moreover, not only do they take up space in landfill sites, since most plastics do not degrade, but they also emit poisonous gases once burned.

However, with composting bags, your waste reduction tasks are a lot safer, easier, and better for the environment. That is because the plastics used in these bags are biodegradable. Made from an Oxodegradable additive, composting bags will typically degrade between 9 months to 2 years, depending on the condition and location of the place.

## MATERIAL HANDLING BAGS

As the name implies, material handling bags are used to handle bulk goods and products effectively. Relatively larger than other plastic bags types, they are particularly designed to carry bulk materials and have applications across various industries. There are a wide range of sizes available ranging from 28" x 28" x 12" to 51" x 51" x 71" and even beyond.



Moreover, it can carry up to 4,000 lbs of materials, depending on the design, of course. There are a number of benefits industries can gain by using material handling bags, these include:

- ▶ **Cost Savings** – When material handling bags are used for bulk materials, the labor cost per container is typically reduced.
- ▶ **Enhanced Safety** – Handling bulk materials in drums and bags can expose workers to several lifting injuries. However, with material handling bags, everything is controlled by mechanical means, such as pallet jacks or fork trucks. This reduces the need for manual movement.
- ▶ **Economical Packaging** – As the bag capacity increases, tare weight (as a percentage of material weight) decreases. This allows more materials to be shipped with less packaging at the same cost. Additionally, these bags can also be stacked and positioned more efficiently, therefore maximizing storage facility space and container usage.

## SHRINK BUNDLING FILM

A combination of product efficiency, maximum shelf impact and custom printing, shrink bundling films are mainly designed to hold and protect your product, while still allowing consumers to see what is inside.

Typically made from Polyethylene, these films are available in a wide array of widths, thicknesses and gauges. They provide high clarity and a tight closure, which ensures your item(s) are viewable and secure. In addition, these films will also allow heavy items, such as cans, water, sodas, and several other items to be transported easily.

## STRETCH FILM

Also referred to as stretch wrap, stretch films are highly stretchable plastic films that are used in a variety of industries to wrap around goods and materials on pallets, keeping them tightly bound.

This reduces the probability of worker injuries, discourages load tampering, and not to mention reduces product losses. A variety of thicknesses and widths are offered. You can even customize your own stretch film.

Stretch films can be divided five different types, including machine stretch film, bundling stretch film, hand stretch film, static dissipative film, and hand stretch film.

## MEDICAL DEVICE PACKAGING

As the technology used to create medical devices advances, so has the technology used for their packaging. Because medical devices feature unique specifications and usually require sterilization, packaging for medical devices is specifically designed to protect the integrity of the device as well as uphold the highest medical standards.

Medical device packaging can be divided in a few types, which are:

- ▶ **Blister Packaging** – Blister packaging typically protects the package's contents from contamination. Depending on the film used, blister packs can feature either push-through lidding or a peelable layer to remove the medical device from the package.
- ▶ **Multi-Compartmental Trays** – Typically manufactured from rigid materials, multi-compartmental trays are used to package sensitive medical device items.
- ▶ **Individual-Wrap Packages** - This type of packaging is ideal for single use applications, such as syringes. While blister packaging offers the same benefits, it is mainly used for its added support.

## TIPS TO CHOOSE THE RIGHT PLASTIC BAG

As you can see, there are various versions of plastic bags available out there. Now, that you have familiarized yourself with each of them, here are some tips that will help you choose the right plastic bag, which will suit your needs:

### ✓ PURPOSE

One of the most important considerations when choosing plastic bags is its intended use. In other words, what do you want to use the plastic bag for? Obviously, you wouldn't want a bag that would collapse or tear when you place heavy items inside it.

No doubt, the cost of good quality bags may be a little more, but the few extra pennies you spend are worth the extra durability you will get. Think about it, you are definitely not saving money if the items placed in the customer's bag collapse due to a tear.

### ✓ SIZE

The size of the plastic bag is another important consideration you need to make. You want the bag to be large enough, so that items can be comfortably placed in it.

At the same time, you also want it to be small enough that it can be easily handled and carried by your customers. There are a variety of bag sizes you can choose from, so don't forget to keep this in mind before you reach a final decision.

## DANTE<sup>®</sup> Log Lighter GAS VALVE

AGA/CGA Certified - ANSI Z21.15  
Listed for maximum pressure of 1/2 psig

- Soft seat globe type valve
- Precision-machined from solid brass bar stock
- Eliminates porosity problem found in sand casting
- Floor plates and matching keys available in Polished Chrome or Polished Brass
- Angle Valve Rating 107,625 BTU
- Straight Valve Rating 81,200 BTU
- New Straight Valve Rating 97,125 BTU
- Certified for use with natural or LPG gas

### TO INSTALL:

1. Blow out all foreign material from line before attaching valve to line. Use teflon tape on all joints.
2. The valve must be in the closed position during the system leakage check. If valve is in the closed position, testing is not to exceed 3 psi per Z21.15, section 2.2.
3. Check for leaks with liquid leak detector.

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## ✓ COLOR

Believe it or not, color is another important consideration! You want the colors of the plastic bag to complement your logo, without straining the eyes of your customers. If your logo features a single color, a black plastic bag would make it easy for your customers to see it. Moreover, you want to ensure the print quality is good otherwise it probably it may come off pretty quickly.

## ✓ COST

Last, but not the least, you want to get the plastic bag at the best price possible. The easiest way to go about this is by comparing the plastic bags you want to buy, so do not forget to keep this in mind when making a purchase.

Keep these tips in mind and choosing the right plastic bag that would serve your purpose shouldn't really be a problem. Though this process may cost you a little 'time', it will keep you from purchasing the wrong plastic bags.

# THE BENEFITS OF CUSTOM PRINTED PLASTIC BAGS

Custom printed plastic bags are another option available to businesses. However, unlike other plastic bag types, they come as a unique marketing tool.

As the name shows, custom printed plastic bags are customizable, which means they can be tailored to meet the specific requirements of your company. The contact information and logo of the company is also included on the bags and therefore helps your business create a place for itself in the highly competitive market.

Several retailers have embraced the concept of these bags, so much so, that you will find custom printed plastic bags in almost every shopping mall or grocery store you visit. But should you choose custom printed plastic bags for your company?

Well, if you decide to use custom printed plastic bags to package your customer items, your business can gain a variety of benefits:

## ADVERTISING

While custom printed plastic bags introduce the public to your brand, they also provide them the contact details of your company, including your company's email address, phone number, address and other important details.

So, whenever a customer buys items, you are actually advertising your brand by packaging them in your custom printed bags. There is something really different about this type of advertising, but one thing is for certain: it's quite effective.

## BRANDING

While the name of the company captures the essence of your business, branding is required to maintain that name as well as keep customers loyal. Familiarizing the public with your company is a great way to grow your business. And the name and logo of the company plays an important part in doing so.





Custom printed bags in this regard, put the name and logo of your business on the bag itself. This proves to be an effective way to make people aware of your company, especially if you already have a lot of customers buying from you, because your brand recognition increases with each bag you distribute!

## VARIETY

There are a variety of options available with custom printed plastic bags. In fact, you can get them in any shape, size, color, style and thickness you desire. After all, they are customizable! This gives you the opportunity to create a plastic bag that is perfect for your company. Also, this sets you apart from the competition, as you have a bag with unique packaging.

## LONGEVITY

Customers will use your company's bags to carry their purchases safely home. However, they will also reuse these bags later on for a variety of applications. Therefore, your business gets some free advertising. And it will continue as long as those bags are used!

As you can see, custom printed plastic bags create a number of profitable opportunities for businesses. No wonder these bags are used by numerous retailers!



# WHY SHOULD WE USE PLASTIC BAGS?

The question should rather be why shouldn't we use plastic bags? Around a trillion plastic bags are used worldwide on a yearly basis. That's a lot of plastic bags being used and obviously they aren't that 'important' without a reason.

Not only are plastic bags versatile, they are also inexpensive, easy to carry and provide users with multiple other benefits, due to which plastic bags remain the preferred method of handling, carrying and storing items since its inception.

So, here are a few reasons why you should consider using plastic bags:

## VERSATILITY

Yes, plastic bags are used in supermarkets so that you can easily carry your groceries. However, if you think that is their only use, think again! Plastic bags can be used for many different purposes. They are versatile, which is one of the biggest benefits you get.

Whenever you go to a store or market, you get a plastic bag at no cost whatsoever. And once the items are out of these bags, you can use them in a multitude of ways, such as storing foods in the refrigerator or lining your trash cans. You should go through the chapter 'Different Uses of Plastic Bags' for more uses.

## CUSTOMIZABLE

If you are running a business, it is particularly easy to have your company's logo, name, and other information printed on plastic bags. Moreover, whatever changes you want to make, let's say for example, to the design, they can be made quite easily. All you need to do is tell the plastic bag manufacturer your specific requirements and you will get what you desire in no time!

## AFFORDABILITY

Honestly, households never really need to buy plastic bags. After all, you rack up so many plastic bags whenever you go out shopping. Nevertheless, if you are running a business, you can get plastic bags in bulk for inexpensive prices.

## RECYCLABLE

Plastic bags help you in numerous ways. However, with great power comes great responsibility. Everyone should be responsible and recycle plastic bags after they are no longer usable. It's a common myth that plastic bags cannot be recycled and truth be told, they are quite easy to recycle.

## ENVIRONMENTAL IMPACT

Plastic bags have an overall lesser impact on the environment as opposed to paper bags. They require less energy to produce, recycle, and transport. However, studies show, recycling rates are relatively lower than paper.

Though we are benefitted by plastic bags in many ways, and their use is highly recommended for your convenience, it is your responsibility to recycle them so that they do not end up in landfills.

So, now the answer is up to you, do you want to exploit the various benefits of plastic bags? All you need to do is use them!



# PLASTIC BAGS VS. PAPER BAGS: WHICH IS BETTER?

So, you are aware of the numerous benefits plastic bags bring, but every time when you wrap up your grocery shopping and get in line for checkout, you find it somewhat difficult to choose between paper and plastic bags.

The thought of convenience pulls you towards plastic, but you may automatically go for the option that is 'proclaimed' environment-friendly: paper.

Keeping this in mind, which option is really better: paper or plastic? Well, this question has created a huge debate. It may seem like an easy choice, but don't just let the green guilt push you to opt for paper.

Most people think of paper bags to be more environmentally friendly simply because of the fact that they are made from wood, which is a renewable and organic resource.

However, if we take a look at the various factors that go into the manufacturing of both paper and plastic bags, you will find that producing paper bags is a lot less environmentally-friendly as opposed to producing plastic bags.

In this chapter, we will compare the various factors that go into the production of both plastic and paper bags:

## ENERGY CONSUMPTION

The production of one hundred million plastic bags requires energy that is equivalent to almost 8,300 barrels of crude oil. At first, this may sound like a lot for the production of something as nominal as plastic bags, but only until you consider the amount of energy it takes to produce plastic bags of the same number.

It takes five times that much total energy! While it does require the cutting down of valuable trees, producing one hundred million paper bags also requires energy inputs that are equivalent to 15,100 barrels of crude oil, plus additional inputs from nuclear energy, wood waste and hydroelectric power.

## WATER CONSUMPTION

Both manufacturing processes use water. It takes at least 220 liters of water to produce one thousand plastic bags. However, when it comes to paper bags, it takes 3800 liters to produce the same number of paper bags. That's almost 17 times the volume used for plastic bags!

If we dive further into this, these paper bags would also weigh 10 times more, and take up seven times the space in transit to stores and supermarkets, ultimately resulting in significantly higher greenhouse gas emissions than a plastic bag.

## RECYCLING

When it comes to recycling, the process involved in paper bags is more difficult as compared to plastic bags. In paper bag recycling, the bags are first re-pulped using several chemicals. The pulp fibers are then separated, and cleaned and screened to ensure they are free of contaminants. Finally, the fibers are washed, pressed, and then rolled into paper once again.

On the other hand, plastic bags are simply re-melted and re-formed. However, that's not the only difference here. It takes 91% less energy to recycle a kilo of plastic bags as opposed to a kilo of paper. Nevertheless, due to lack of awareness and recycling facilities, the rates of plastic bag recycling are significantly lower than paper bag recycling.

## POLLUTION

Obviously, the production of both paper and plastic bags results in air pollution. However, paper bags pollute 70% more than plastic bags, which is significantly higher.

According to a study, paper manufacturing causes 80% more greenhouse gas emissions than plastic bags. On the other hand, paper bag making also attributes 50 times more towards water pollution as opposed to plastic bags.

Paper bags also generate 80% more solid waste than plastic bags. So, considering all these factors, it is evidently clear that plastic bags are the greener option of the two.





# RUTAN

## THE IMPORTANCE OF BEING RESPONSIBLE

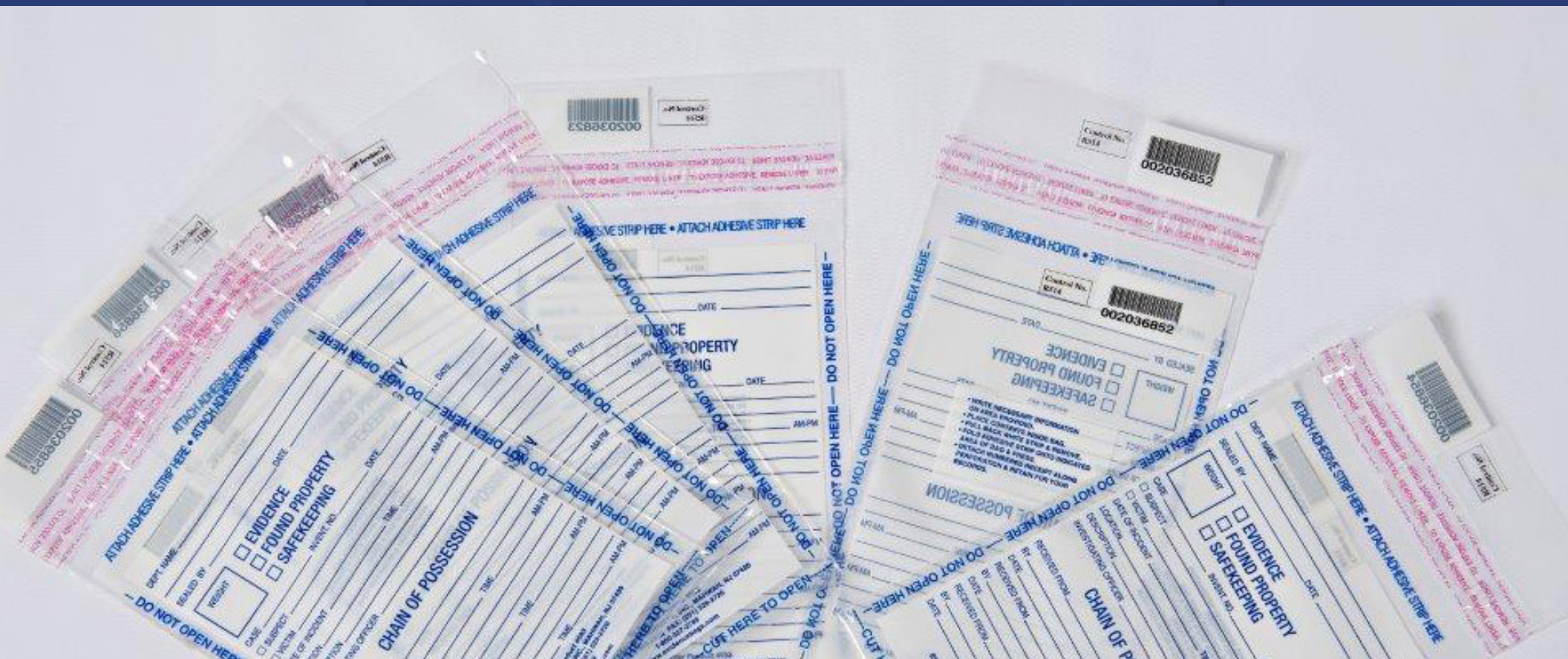
The Importance of Being Responsible

Despite the fact that plastic bags are more convenient and greener than plastic bags, it does not necessarily mean they should be used recklessly. While they might not be the largest contributors to the landfills today, plastic bags could become the most widespread forms of garbage if not used responsibly.

Discarding them in parks or on highways, even on beaches, is becoming a common phenomenon. Call it lack of awareness or simply a lack of concern; most people fail to realize that a lot goes into making a plastic bag.

So, should we replace them with paper bags? The answer is no, as that will only add to carbon emissions, along with the energy consumption that goes into cutting, printing, packaging and transporting paper bags.

Then are reusable bags a good alternative? To find out the answers, move on to the next chapter.



# RUTAN

## THE PLASTIC BAG PROBLEM

Plastic bags are prevalent in our everyday lives. It nestles our DVDs and frames our glowing computer screens. It fills our fridges, storing food. It helps us carry around our groceries, clothes and several other items. Unfortunately, there is a darker side to plastic bags.

They are not biodegradable, which means they always exist! And considering the fact that millions of plastic bags are being used in the US every year, the plastic bag problem continues to grow. There is no doubt about the fact that plastic bags are extremely beneficial, but it is true that plastic bags pose some unique problems.

As mentioned earlier, a lot goes into manufacturing a plastic bag. There are several factors involved, yet plastic bags are used so freely and irresponsibly.

Cashiers stick few items in each bag and offer customers double bagging. On the other hand, people gather piles upon piles of plastic bags in their closets, where they ultimately end up flapping from trees, blowing down the streets, clogging storm drains, and making their way out to the sea.

However, we have no one else but ourselves to blame.

### SHOULD YOU SWITCH TO OTHER ALTERNATIVES?

So, does that mean switching to other alternatives such as cloth bags is the solution? If you think so, think again, as reusable bags pose their own risks and dangers to human health.

A study formulated by colleagues at the University of Arizona and Lorna Linda University, based on the contamination of reusable bags stated in their 2010 Assessment of the Potential for Cross Contamination of Food Products by Reusable Shopping Bags:

“Large numbers of bacteria were found in almost all bags, and coli form bacteria in half of them. Escherichia coli were identified in 12% of the bags and a wide range of enteric bacteria including several opportunistic pathogens. When meat juices were added to bags and stored in the trunks of cars for two hours, the number of bacteria increased 10-fold indicating the potential for bacterial growth in the bags.”

Although some critics showed discontent with the study, real world examples further corroborated its results. For example, in October 2010, a teenage soccer player in Oregon mysteriously fell ill to the norovirus. The teammates quickly caught the sickness as well, leaving scientists baffled.

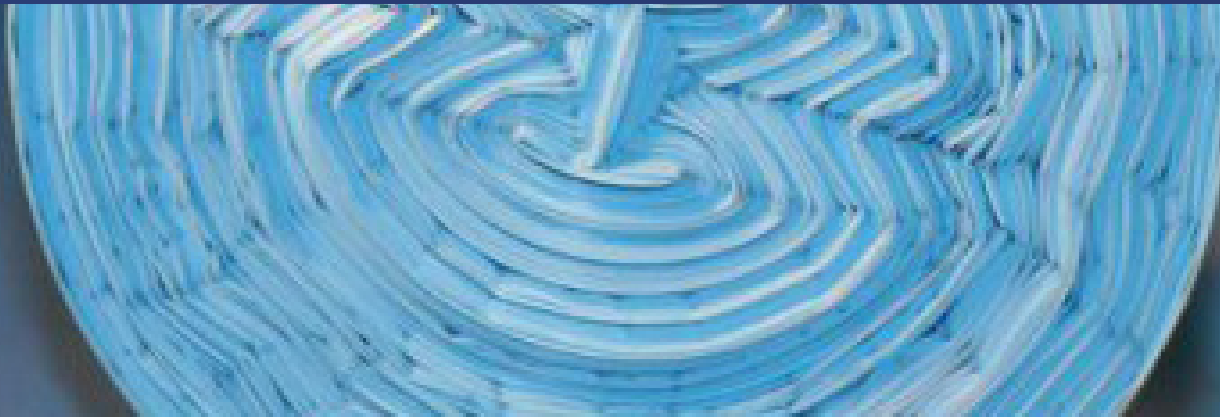
However, soon epidemiologists uncovered the treacherous yet bizarre culprit: a contaminated cloth bag from the soccer player's hotel room! Quite surprising, isn't it? A report by the NBC explained:

"The girl had been very ill in the hotel bathroom, spreading an aerosol of norovirus that landed everywhere, including on the reusable grocery bag hanging in the room. When scientists checked the bag, it tested positive for the bug, even two weeks later"

Therefore, to avoid these dangers several epidemiologists advise that cloth bags should be washed just as we wash our clothes. But let's face it, not everybody has time to wash their reusable bags, as they are often used for a multitude of purposes.

Keeping all these things in mind, you definitely might be wondering: what is the solution? While reusing plastic bags as many times as possible is extremely important, there is another thing that you must thoroughly practice to eradicate this problem for good.

Find out what the solution is in the next chapter!







## IS THERE A SOLUTION?

The solution is to handle their waste and RECYCLE, so that plastic bags do not end up in landfills, oceans, or flying around. Both paper and plastic bags hardly degrade in nature and can take years to decompose, which is why recycling becomes an essential criterion for their use.

Most types of plastic bags can be recycled, some to create new plastic bags, while some are used materials for the manufacturing of other products. However, make sure the bags are dry, clean, and empty when you deposit them for recycling.

Plastic bags that can be recycled including newspaper bags, dry cleaner bags, food storage baggies and most of the plastic packaging used for electronics and furniture as well as household and food items.

On the other hand, certain pre-packaged food bags, cling wraps, heavily painted plastic bags, and ones treated with adhesive materials are difficult to recycle. So, ask your plastic recycling company, before using them.

## THE BENEFITS OF RECYCLING PLASTIC BAGS

Many people feel overwhelmed by the term 'Recycling'. It is nothing but the process of converting waste or old products into new products. Recycling is one of the most important steps towards the reduction of pollution, and it is fun too, especially when done in groups.

Recycling plastic bags reduces the amount of energy usage, raw materials, pollution, as well as the waste Americans produce. It also provides several other environmental benefits

### SAVES ENERGY

The manufacturing process of plastic bags is a long and complicated one. Therefore, it consumes a significant amount of energy. Recycling plastic bags uses energy as well, since they have to be shredded, cleaned, melted, and remolded, but the energy required is relatively less than what it takes to make fresh plastic bags.

According to a study, recycling 1 ton of plastic bags saves electric energy equivalent to 5,774 kilowatts/hour!

## REDUCES OIL CONSUMPTION

The plastic needed to manufacture plastic bags is made from natural gas or crude oil derivatives. This means that the more plastic bags are manufactured the more nonrenewable fossil fuel will be consumed.

However, recycling plastic bags can cut back on oil consumption significantly. According to a study, recycling 1 ton of plastic bags saves crude oil equivalent to 16.3 barrels.

## REDUCES WASTE

Since plastic bags do not biodegrade, they always exist in landfills and oceans. Nevertheless, recycling used plastic bags significantly decreases the amount of waste that goes to landfills. This helps to reduce land and water pollution as landfills play a major role in the destruction of our environment.

## ENCOURAGES SUSTAINABLE USE

The recycling of plastic bags promotes their careful and sustainable use. Today, recycling plastic bags is easier than ever, as up to 80% Americans have access to recycling programs. Nevertheless, although plastic bag recycling facilities are available, the amount recycled is still relatively low and needs significant improvement.

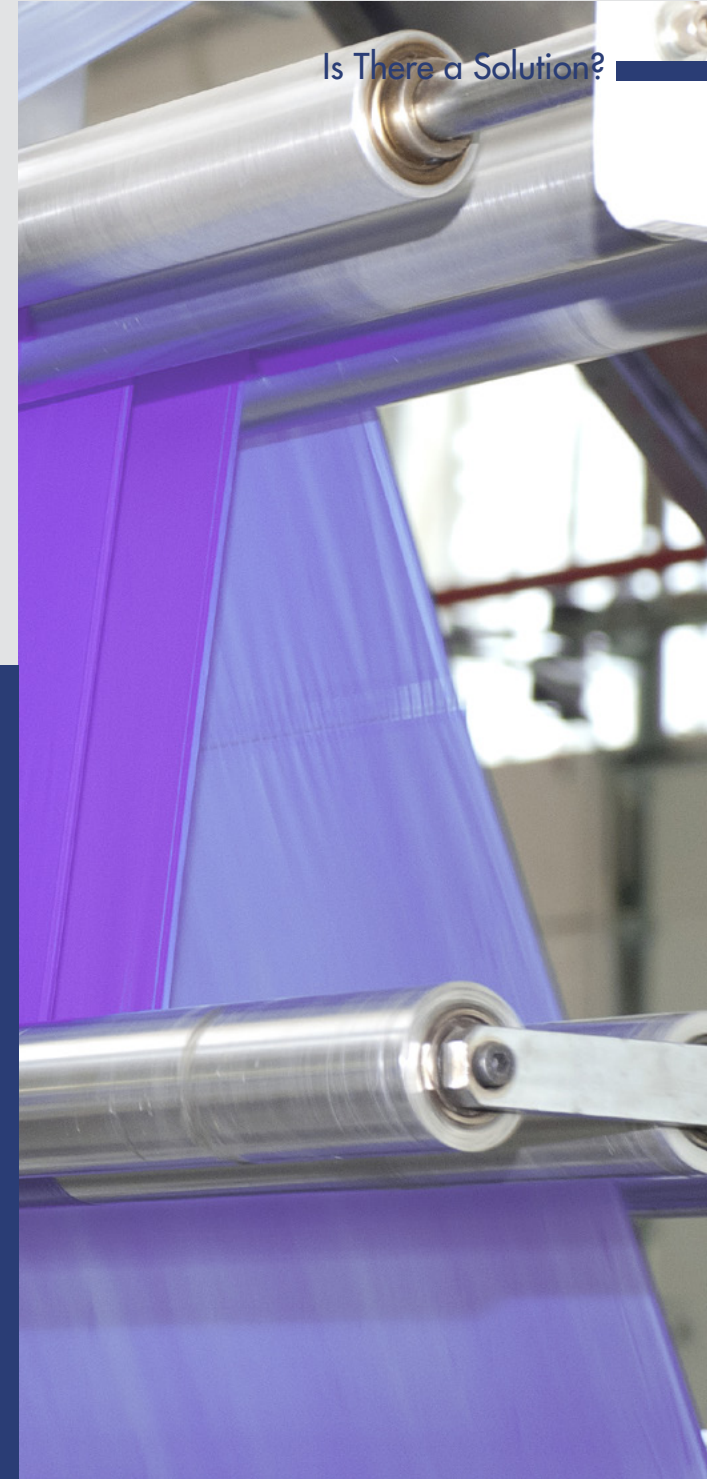
# TIPS TO REDUCE, REUSE, AND RECYCLE PLASTIC BAGS

The number of plastic bags used is increasing, while the recycling rates remain low. However, waste is at an all time high. The production of plastic bags has a reduced environmental impact compared to paper bags. However, with an increasing amount of plastic bags being littered around cities, and ending up in landfills, they aren't really doing much good for the environment either.

The only solution to the ever-increasing plastic bag problem is to reduce waste as much as possible, which can be done effectively through recycling. Nevertheless, by reducing the amount of plastic bags you use, and reusing them multiple times, the huge gap between plastic bag usage and recycling can be bridged even further!

## TIPS TO REDUCE PLASTIC BAG USE

By this, we do not mean avoid using plastic bags, but rather use them responsibly. While plastic bags provide numerous benefits to both consumers and retailers, it does not change the fact they have some drawbacks as well. And, as citizens of the Earth, it's our responsibility to ensure we do whatever possible to avoid them.





### ✓ EDUCATE YOURSELF ABOUT THE IMPACT PLASTIC BAGS HAVE ON OUR WORLD

You simply cannot find a solution without properly understanding of the problem. Plastic bags are causing serious problems right now and it's important you know what they are. Go through the chapter "The Plastic Bag Problem" (if you haven't already) for more information. It's also recommended you learn some facts about plastic bag consumption, including their environmental impact, so that you know how they affect us all.

### ✓ REUSE OR RECYCLE PLASTIC BAGS AT HOME

Everybody has plastic bags at home. However, don't just let them accumulate in your kitchen cabinets. Reuse them as many times as possible such as to line garbage cans and store meat in the refrigerator.

You can also take plastic bags to your nearest recycling centers, grocery stores or drop-off sites for recycling. Plastic bags are 100% recyclable and will go a long way saving energy, reducing oil consumption as well as waste!

### ✓ SHOP AT STORES THAT OFFER A CASH CREDIT FOR BRINGING YOUR OWN BAGS

In an effort to encourage the reuse of plastic bags, several stores offer cash credits to customers who bring their own. Therefore, find and shop at these stores, because not only will you be able to reduce the amount of plastic bags you use, you might even get a discount!

### ✓ COUNT THE AMOUNT OF PLASTIC BAGS BROUGHT INTO YOUR HOUSEHOLD

When you see the waste for yourself and understand the difference one household can make, you can feel good about the positive impact you are making. So, count the number of plastic bags entering your household every week, and reuse and recycle them in order to reduce the impact they have on our environment.

## TIPS TO REUSE PLASTIC BAGS

A lot goes into making a plastic bag, including raw materials (plastic film), energy, and oil. However, all that would be for nothing if they are only used once and then thrown away! Unfortunately, that is one of the main reasons why plastic bags are contributing more towards waste generation than any other item.

One of the simplest ways to reduce waste is to reuse what's already here. Here are a few ideas that will help you reuse plastic bags:

### REUSE THEM FOR THEIR INITIAL PURPOSE

When you go to shop for the groceries, take a few plastic bags with you so they can be used to bag your groceries. Ensure you do not accept new ones until you have made the most out of what's available.





## TIPS TO RECYCLE PLASTIC BAGS

Plastic bags can be easily recycled in the US. Most grocery stores have bins placed in front of the store so the bags can be collected and recycled. There are also government drop-off sites and recycling centers.

These bags are then recycled into other consumer products, such as yarn, decking, park benches, and even new plastic bags. However, recycling rates are particularly poor and need significant improvement.

Therefore, it's high time you set your priorities straight and recycle responsibly. Here are a few guidelines to help you in your recycling endeavors:

1. Hang a plastic bag in your kitchen in order to collect plastic bags to recycle.
2. Collect all dry and clean plastic bags labeled 2 or 4.
3. Collect all other types of plastic bags, including newspaper bags, bread bags, and security bags.
4. At the top of every grocery list, write down the words 'recycle plastic bags'. By doing so, you will not forget to bring your plastic bags along with you on your next visit to the grocery store.
5. Place old and used plastic bags in the recycling bins located at most retail chains and grocery stores.
6. Avoid depositing prepackaged food bags, cling wrap, compostable plastic bags, or bio-based bags, because all of them are considered contaminants and would only hamper the recycling process.

So, keep these tips in mind, and play your part in reducing the negative impact plastic bags are having on our beloved environment.



## WHAT DO YOUR RECYCLABLES BECOME?

Think about it, what happens to the plastic bags that do not end up in our forests, seas, and surroundings? Well, just like other modern day materials, they are recycled into a variety of products.

No doubt, the recycling rates currently are deplorable and need to improve significantly, especially considering the fact that there are recycling facilities available in most cities in the US.

However, we hope that through this eBook, not only will you be encouraged to reap the benefits of plastic bags by using them, but also play your all-important part in saving the environment by reusing and recycling them responsibly.

So, have you ever wondered what happens to the plastic bags you have recycled? In this section, you will learn about the products that are manufactured using plastics from your recycled bags.

### NEW BAGS

Whether you take them to a recycling center, drop them off at a bag recycling collection facility, or place them in a recycling bin, these plastic bags can have more than just one life. This is evident from the fact that most of the recycled bags today, are melted down and used for making new bags! Ironic, isn't it?

As compared to making plastic bags from scratch, this process is a lot more efficient and gentler on the environment. It also saves massive amount of petroleum, which would have otherwise been used for producing new plastic bags.

### CRAFT

Did you know that several crafters make amazing crafts out of plastic bags lying around at home? Yes, other than being reused for various applications, plastic bags are also being increasingly used in the crafts industry.

They are used for making yarn, tote bags, raincoats, headbands, and even whole outfits – amazing, right! Why don't you use plastic bags for your next craft project? Who knows, you might just come up with some creative use.



## COMPOSITE LUMBER

According to statistics, a majority of the plastic bags recycled in the US wind up as composite lumber. It is a mix of wood scraps and plastic bags, such as old pallets and sawdust.

This lumber is durable, long-lasting, and requires little maintenance, making it ideal for outdoor and decking construction. Several top manufacturers are producing this type of lumber in the country, therefore further increasing the demand of recycled plastic bags.

## NANOTECHNOLOGY

The PBS NewsHour website states that a portion of recycled plastic bags, end up being utilized by the nanotechnology field. You may be thinking, "What use does an advanced field like nanotechnology have for plastic bags?" Well, turns out that scientists have developed a new method to produce carbon nanotube membranes by recycling plastic bags!

These membranes can potentially be used for biomedical innovations, and energy storage. More importantly, this is an effective solution to minimize environmental pollution created by manufacturing valuable goods.

## FILM & SHEETING

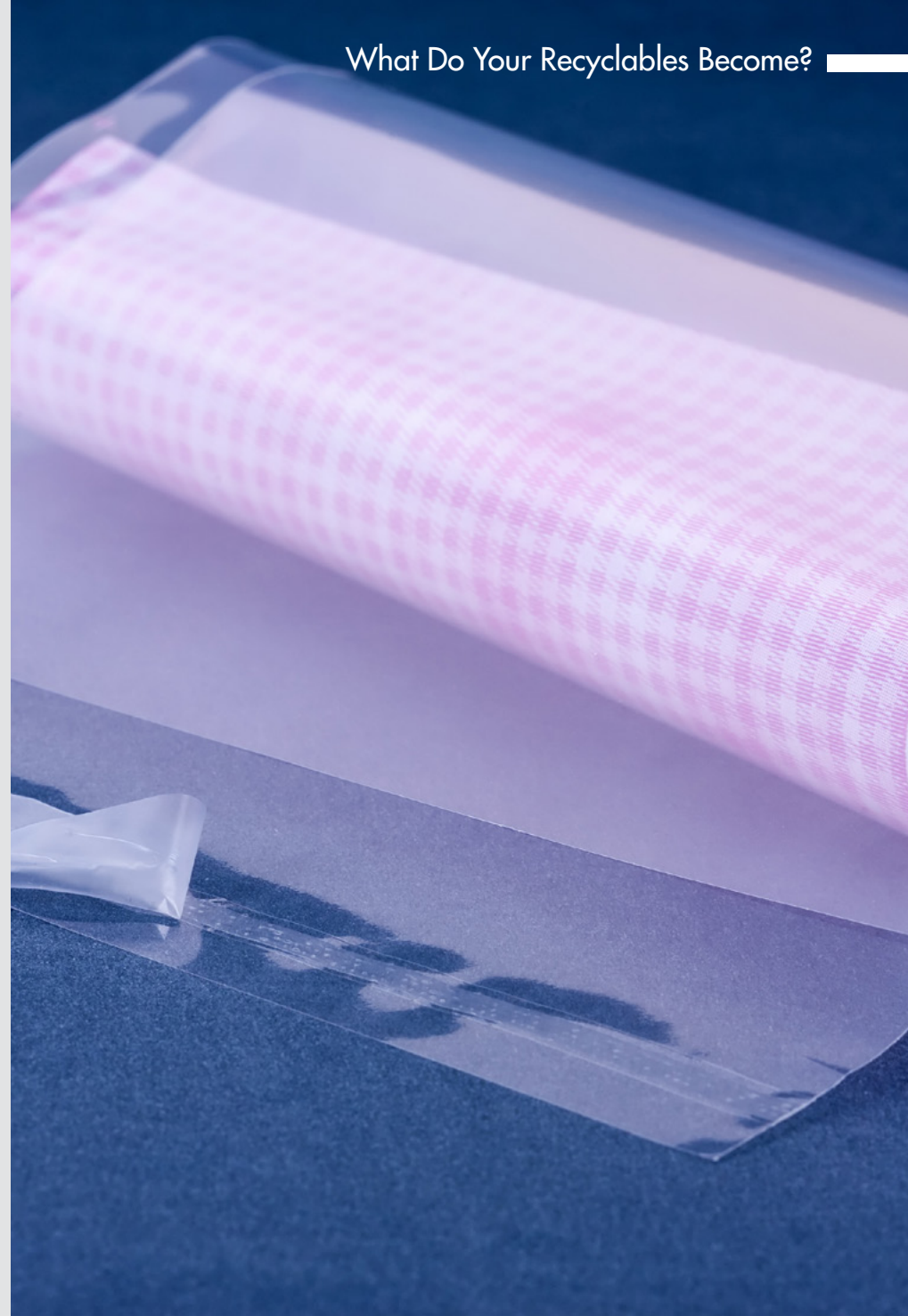
LDPE (Low-density polyethylene) is a common material used in the manufacturing of plastic bags. It is flexible, transparent, and has the ability to resist strong chemicals, such as bases and acids.

Due to its durability, toughness, and flexibility, LDPE from recycled plastic bags is used to make products like shipping envelopes, trash bags, film and sheeting, as well as several others that require these features.

As you can see, recycled plastic bags are used for making various products. Recycling plastic bags not only reduces the consumption of petroleum, but also pollution, waste, and energy.

Go through the sub-chapter (if you have not already) 'The Benefits of Recycling Plastic Bag' for more information regarding the benefits of recycling these bags we heavily rely on.

As we conclude this chapter, we hope you are now motivated and encouraged enough to play a responsible role in the use of plastic bags.





# MYTHS ABOUT PLASTIC BAGS: DEBUNKED

Just like everything else in this world, plastic bags too have their fair share of myths going around. And clearly, these misconceptions are the main reason why plastic bags are being demonized across the world today.

Due to this reason, we will be debunking some of the most common myths about plastic bags in this chapter, which will not only change your outlook on plastic bags, but also prove that they are a much better and viable option than the presently 'popular' paper bags. So, it's myth-busting time:



MYTH  
#1

“PAPER BAGS ARE  
A MUCH BETTER  
ENVIRONMENTAL  
CHOICE THAN  
PLASTIC BAGS”

Plastic bags are 100% recyclable and as far as the impact on environment is concerned, the water emissions, air emissions, and solid waste of paper bags is significantly greater as opposed to plastic bags. Not convinced? Here are some concrete facts about the environmental impact of both types of bags:

- ✓ Paper bags generate 50 times more water pollutants, and 70% more emissions than plastic bags.
- ✓ Plastic bags generate 80% less solid waste than paper bags.
- ✓ Plastic bags use 40% less energy as compared to paper bags.
- ✓ Even paper bags manufactured from recycled fiber utilized more fossil fuels than plastic bags.

As you can see, paper bags are significantly ahead of plastic bags in every environmental impact related aspect. So, how does that make them a better choice than plastic bags? Something to ponder about, isn't it?

MYTH  
#2

“PLASTIC BAGS  
INCREASES  
AMERICA'S  
ADDICTION  
TO OIL”

Believe it or not, plastic bags are one of the most energy efficient things to manufacture. According to statistics, less than .05% of a barrel crude oil is used for the manufacturing of plastic bags in the US. On the other hand, 93% to 95% of each barrel is used for heating purposes and fuel.

In fact, most of the plastic bags used in the US are made from natural gas, 85% of them to be exact. And although plastic bags are made from natural gas and crude oil, the overall amount of fossil fuels they consume during their lifetime are significantly lesser than paper bags and compostable plastic.

So, banning or taxing plastic bags will really do nothing to curb America's oil consumption. After all, it hardly uses a fraction!

MYTH  
#3

“PLASTIC BAGS  
ARE THE PRIMARY  
COMPONENTS OF  
LANDFILLS AND  
GARBAGE”

This is yet another baseless myth about plastic bags. Paper is the most frequently found item in landfills, and on average, accounts for more than 40% of a landfill's contents.

When it comes to the primary components of garbage, 95% of all garbage in the Western World is made up of cigarette butts, candy wrappers, and chewing gum wrappers. Plastic bags are responsible for less than 1% of all garbage. Nevertheless, people need to understand the importance of using and disposing all materials properly, as it is the only key to reducing garbage.

MYTH  
#4

“PLASTIC BAGS  
HAVE A LOW  
RECYCLING RATE,  
AND THAT PROVES  
RECYCLING THEM  
DOESN'T WORK”

This is not true, recycling plastic bags does work. However, not everybody is aware of the fact that they are 100% recyclable, and neither does every community have access to plastic bag recycling.

The only way to increase these rates is initiating a national plastic bag-recycling program. This would not only make everyone aware of plastic bag recycling, but will also bring the recycling solution to everybody.

Wal-Mart, for example, has an excellent recycling program, where they have recycling bins placed within their stores. The US is in dire need of more programs like these. According to statistics, Wal-Mart reduced plastic bag waste by more than 38% in 2013. Imagine the difference a few more programs and a little awareness could make!



MYTH  
#5

“IT TAKES AROUND  
1,000 YEARS FOR  
PLASTIC BAGS TO  
DECOMPOSE IN  
LANDFILLS”

Almost nothing (food, paper, plastic, etc) decomposes in today’s landfills. That’s because all these products are actually designed to be as dry and stable as possible. According to a research by William Rathje, who is the owner of the Garbage Project, newspapers can be readable and intact even after years in a landfill.

MYTH  
#6

“THE DEMAND  
FOR RECYCLED  
PLASTIC IS CLOSE  
TO NONE”

If it were 15 to 20 years ago, this statement would have been somewhat true. However, today, there is a growing market for recycled plastic. It’s significantly cheaper to use recycled plastic than obtaining new materials, which encourages the recycling of plastic bags.

Apart from that, recycled plastic bags are also increasingly being used to make new plastic bags, railing and outdoor decking products, as well as several other items, further increasing the demand for recycled plastic.

MYTH  
#7

“PLASTIC BAG  
BANS ARE  
ON THE RISE,  
THROUGHOUT  
THE COUNTRY”

Not really. As a matter of fact, plastic bags have not been banned in any State. In San Francisco, the government is encouraging consumers to use compostable plastic bags, rather than recyclable bags. On the other hand, in several States, there is a growing movement to increase the access to plastic bag recycling, not to eliminate them.

Cities in California, New Jersey, and Connecticut are only banning certain types of plastic and planning to implement plastic bag recycling programs, in order to increase awareness as well as recycling rates.

MYTH  
#8

“IT’S EXTREMELY  
EXPENSIVE TO  
RECYCLE PLASTIC  
BAGS”

The price of NOT recycling plastic bags is high! Through recycling, valuable resources can be saved and the amount of waste ending up in landfills can be reduced significantly.

It also helps in the reduction of litter, as plastic bags are stored for further processing. It’s also worth mentioning that recycling a pound of plastic takes 91% less energy as compared to a pound of paper.

MYTH  
#9

“FOR PEOPLE LIVING  
NEAR WATER,  
MARINE LIFE CAN BE  
PROTECTED BY ONLY  
USING PAPER BAGS”

The production of paper bags has a significantly higher contribution towards water and air emissions and solid waste as compared to plastic bags. Therefore, using them is definitely not the solution. To ensure there is no threat to the environment, as well as wildlife, people have to make it a habit to recycle and dispose all kinds of products properly.

MYTH  
#10

“PLASTIC BAGS  
ARE KILLING  
MARINE LIFE”

As mentioned earlier in this eBook, this is a myth, which originated from a 2002 study about plastic bags that was commissioned by the government of Australia.

The authors of the report misquoted a 1987 Canadian study, which mistakenly attributed the vast number of marine animal deaths to plastic bags, when it was actually due to discarded fishing nets, ropes and lines.





# CONCLUSION

There you have it! In this eBook, we have covered everything (in detail) you need to know about plastic bags. Not only are plastic bags extremely advantageous for both consumers and retailers, but they also have numerous applications, which have made them a somewhat daily requirement in our lives.

From packing lunch to carrying important documents, plastic bags help you store numerous daily items, while costing you little to nothing. This makes them the best packaging option for everyday purposes!

However, some misconceptions and not to mention numerous myths have resulted in plastic bags being seen as an environmental threat. The fact of the matter is that they have a lower impact on the environment as compared to other packaging options, such as paper bags.

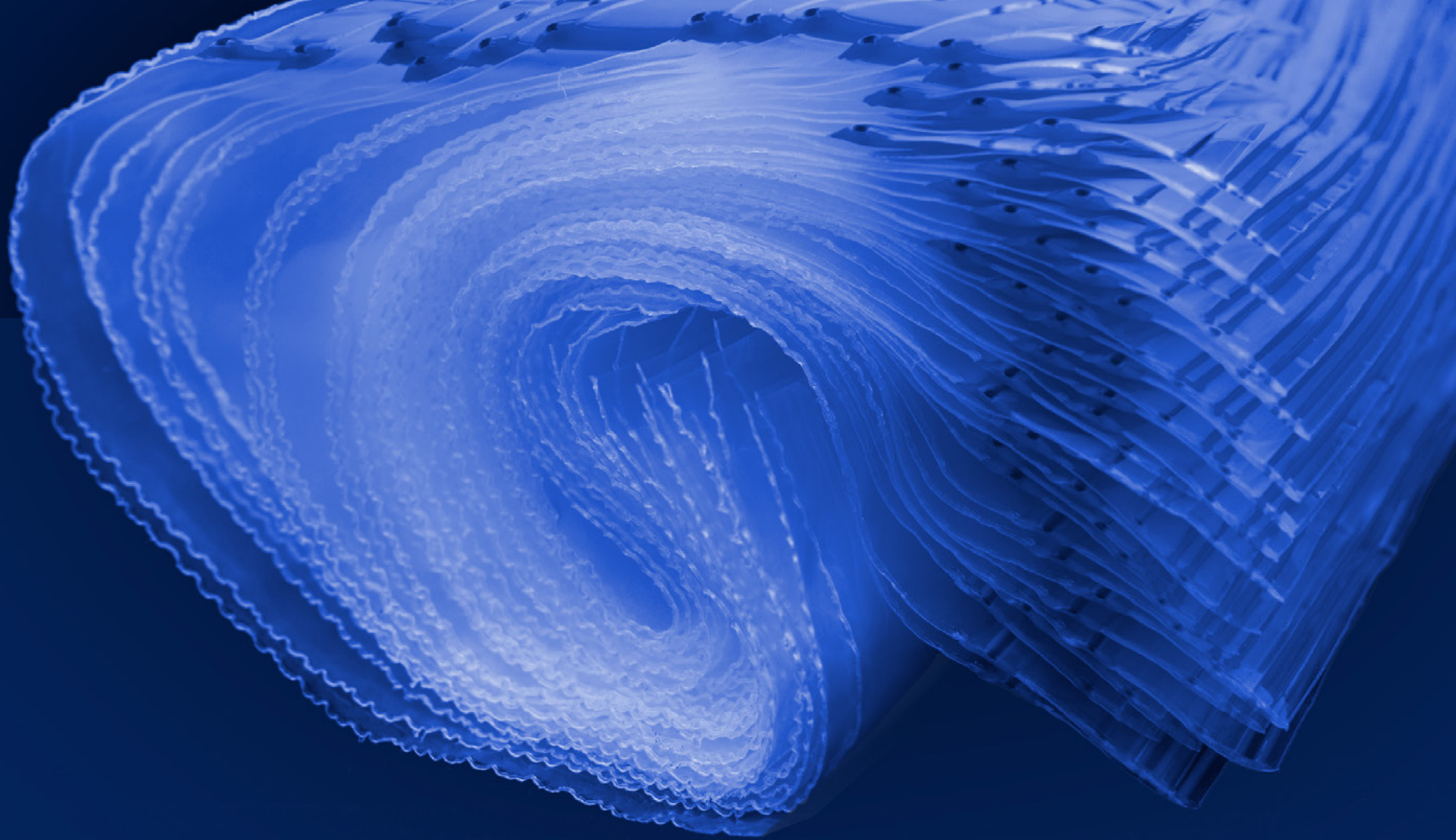
Plastic bags require less energy to produce, recycle, and transport, than other packaging options. Nevertheless, the one area where plastic bags fall behind in is recycling. Sure, they have a lower impact on the environment, but as advantageous as they are, using them recklessly and irresponsibly will just worsen the situation.

To reap the full benefits of plastic bags, and to reduce their ever-increasing effect on the environment, it is crucial that we all use them as responsibly as possible. Plastic bags are non-degradable, which means they do not break down by natural processes. They can exist for thousands of years and can affect our environment and specifically oceans, in the worse way possible.

However, this can easily be avoided by re-using and recycling of plastic bags. Think about it, why let something so advantageous and efficient go to 'waste, when it can be avoided by being a little careful and cautious.

As we conclude, we would like to encourage everyone to use plastic bags not only for carrying groceries, but also for various other applications around your home. Not to mention, makes sure you recycle regularly as even plastic bag waste can be used for producing other products, saving a lot of energy in the process!





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