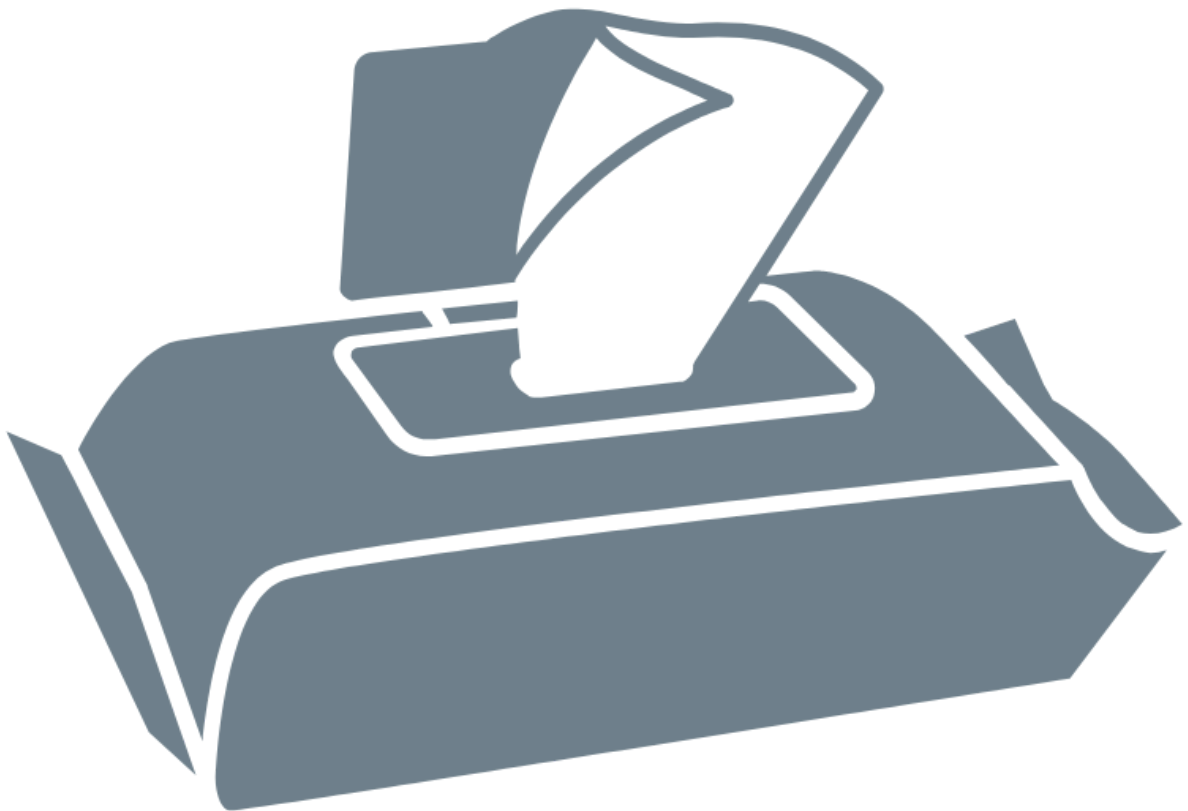




What's Inside:

WIPES



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# What's Inside: Wipes

Every parent knows that wipes are a modern-day necessity. What started as a tidy way to clean a baby's bottom is now used for wiping dirty hands, scrubbing surfaces, removing makeup, shining leather, removing stains, dusting, sanitizing counters, wiping down computers, and more. They've become the de facto cleaner for travel and wiping down car dashboards, but they can also be used as a proxy "shower" when camping, for intimate use, to care for elderly people, and yes, as a TP alternative for adult bums too.

Wipes have worked their way into our everyday lives, far beyond diaper changes. With their ever-increasing use, it's no surprise that wipes are projected to be a [\\$1.9 billion industry](#) by 2021. The real problems are that conventional wipes don't break down in the environment, wreak havoc on sewer systems when flushed, and can contain toxic ingredients.

With a seemingly endless list of uses for wipes, it's more important than ever to choose ones that are safe for people (you and baby) and the planet (especially oceans and wildlife).

At MADE SAFE, we believe it's possible to wipe responsibly, sustainably, and safely. Read on to learn which ingredients to avoid, how to shop for safer wipes, MADE SAFE certified options, and a printable and screenshotable shopping guide.



## TOP CONCERNS WITH WIPES

1. Environmental Harm
2. Toxic Ingredients
3. Flushability

## The Problem with Wipes AT-A-GLANCE

**Wipes are used for much more than just babies, and their use is skyrocketing. Think: cleaning, sexual health, makeup removal, as a toilet paper alternative or supplement for adults, and beyond. Yet conventional wipes can contain toxic ingredients, can create serious problems in sewer systems when flushed, and often are made of materials that don't break down in the environment, so they will stick around long past when your baby is full-grown!**



# ! 1. Environmental Harm

Most wipe materials (or substrates) are actually made with or from plastic. They may feel soft against your skin, but they're the same substances as those used to manufacture plastic drinking bottles, food packaging, diapers, and more. The wipe material has merely been manufactured differently to create a unique texture and structure. Wipes are often made of PET, polypropylene, or cotton woven together with plastic resins.

Pollution from plastic is a threat to the ocean, which means it's a threat to aquatic life and humans. One of the ways plastic is concerning is that it's typically not biodegradable. Biodegradability is the ability for a substance or material to break down in the environment within an appropriate period of time. Even though a number of harmful ingredients listed later in this report are not readily biodegradable, the primary biodegradability concern with wipes is the material itself.

[Check out the "Plastic Pollution" section](#) for more on how wipe materials impact the environment.

Wipes are sometimes made of cotton. That doesn't make them less of a problem, however, as most of that cotton is grown conventionally and comes with concerns related to pesticide and water usage.

[Read on for additional information on conventional cotton.](#)

## Environmental Harm AT-A-GLANCE

**Most wipe materials are actually plastic, including PET and PP – two plastics used in the manufacturing of plastic bottles and packaging. Plastic is typically not biodegradable, meaning it sticks around in our environment. Plastic can break down into tiny pieces called microplastics that are ubiquitous in the ocean and waterways. Consuming microplastics may threaten wildlife, and because humans often eat ocean animals, microplastics may threaten our health too. Because conventional wipes aren't biodegradable, they contribute to plastic pollution in our oceans and beyond.**



# Plastic Pollution



Plastic pollution in our oceans – you’ve heard about it in [recent news stories](#), [documentaries](#), and even from [celebrities](#). Why are MADE SAFE and so many other [organizations](#) and individuals concerned?

## Here are the basics:

- Plastic is (essentially) forever. [Plastic is typically not biodegradable](#), meaning it will [stick around in the environment](#) far longer than it should. It may break down into tiny pieces, but it doesn’t truly go away.
- The overwhelming majority of plastic is not recycled. About [50% of plastic is used for single-use](#) products – those designed to be used once (like a wipe, to-go container, or straw) and then thrown away. And [less than 10 percent](#) of plastic is actually recycled!
- Packaging is the [largest application](#) of plastic. Think: yogurt tubs, plastic wrap around foods, chip bags, and personal care product containers.
- Plastic can break down into tiny pieces called [microplastics](#). Microplastics are pervasive in marine environments from [oceans](#), [wastewater treatment outflow](#), [bays](#), [remote lakes](#), [Great Lakes](#), and [even our drinking water](#), including tap and bottled water.
- Microplastics can be [consumed by aquatic life](#), large and small. Small aquatic animals that have eaten plastic are often the prey of larger aquatic life. This allows microplastics to [progressively build up](#) with each successive level of the food chain. One of the biggest predators of small aquatic life? Humans. [Plastic particles](#) have been [found in seafood](#) typically [eaten by people](#).
- [Building evidence](#) suggests that [marine animals may be threatened](#) by consuming microplastics.

## How Does Plastic Pollution Affect People?

Plastic can break down into tiny pieces called [microplastics](#). Microplastics, which are in marine environments everywhere, can then be [eaten by aquatic life, including seafood](#). Microplastics are also commonly found in [drinking water](#) – both tap and bottled. Researchers don’t yet understand [how microplastics will impact humans](#). [More study is needed](#) to understand the risks. However, researchers do know that plastics are capable of leaching [toxic substances](#), so it’s very possible that ingesting microplastics is harmful.

- Marine life is impacted by microplastics in ways beyond ingestion. Animals can be [entangled or smothered by debris](#). This can injure, debilitate, or even kill animals.
- Microplastics may leach toxic substances as they break down and when they're ingested. Toxic substances are used in the manufacture of plastic, and as the plastic [breaks down in the aquatic environment](#) or [animals' stomachs](#), it can release those chemicals. Toxic chemicals have been detected [within marine organisms](#) and water surrounding dense patches of plastic.
- Where does plastic in the ocean come from? [Land](#). The [majority](#) is the result of urban run-off from landfills, litter, production and industrial sites, and also from trash being blown from garbage trucks and landfills. However, [marine sources are substantial too](#) and include fishing boats and merchant ships.
- Clothing and textiles are [another source of plastic pollution](#). If the shirt you're wearing isn't a natural textile like cotton, linen, wool or hemp, it's likely a form of plastic. Synthetic textiles such as fleece, acrylic, spandex, and polyester can shed [microfibers](#) that end up in waterways and drinking water.



## Polyethylene Terephthalate (PET or PETE)

One of the most common fibers used to make wipes is poly(ethylene terephthalate) or PET, which is the same material used for soda bottles. You'll find polyethylene terephthalate written as PET or PETE, or the recycling code #1. PET is also used to make polyester.

PET does not readily break down in the environment. So, all of those wipes headed to the landfill will stick around for (almost) ever.

Making PET is an energy-intensive process, using far more energy than manufacturing other textiles like conventional or organic hemp and cotton, but it's sold less expensively. In the production process,



emissions can severely contaminate water sources with a number of [pollutants](#).



In addition to its issues with biodegradability, PET may pose some toxicity risks. Antimony trioxide is [commonly used as a catalyst](#) in the production process. Antimony trioxide is classified as [possibly carcinogenic](#), and some forms are [potentially endocrine disrupting](#). Researchers have found antimony at [detectable levels](#) in [PET textiles](#), but there is no research on the substance's ability to migrate from a wipe to skin. A number of researchers have also confirmed that [other estrogenic compounds](#) are [capable of migrating](#) from PET water bottles [into its contents](#). However, there is no research available on the ability of these compounds to migrate into the skin.

## Polypropylene (PP)

Polypropylene is a plastic that is used for many things we encounter every day: packaging, conventional diapers and feminine care, carpeting, and – of course – wipes.

Polypropylene is often abbreviated as PP and can be identified by the recycling code #5.



Polypropylene is one of the [main components of the plastic found in pollution](#) in the oceans. Polypropylene is considered to be [non-biodegradable](#). It can, however, be broken down into small microplastics, partially by [UV light](#). For more on the impact of microplastics in the ocean, [see "Plastic Pollution."](#)

## Conventional Cotton

Growing conventional cotton can use [heavy doses](#) of potentially toxic [pesticides](#). It is also often water-intensive. The process requires [more than 713 gallons](#) of water to produce roughly enough cotton for a tee-shirt. That is typically not enough fabric to produce a pack of 100% conventional cotton wipes.

Cotton is also one of the world's most common GMO crops. In the United States, [the majority of cotton is GMO](#).

## Cotton and Plastic Mixtures

Some wipes are made of cotton that is woven together with plastic resins. These wipes can carry some of the same concerns as the plastics and conventional cotton listed above.

### Plastic in Wipes: 5 Facts

- 1 Most wipe materials are actually made with or from plastic
- 2 Pollution from plastic – especially single-use plastic like wipes – is a threat to oceans and humans.
- 3 Plastic is typically not biodegradable.
- 4 Plastics can break down into microplastics, which are everywhere in aquatic environments, including drinking water.
- 5 Microplastics are often consumed by animals, including seafood eaten by people.



## 2. Toxic Ingredients

Wipes can contain many different ingredients with various functions; some of these ingredients are what make wipes actually feel wet. Formulators use ingredients that deliver moisture to skin alongside preservatives that keep the wipe shelf-stable and effective, and inhibit the growth of mold, harmful microbes or fungus, or otherwise “going bad.” Wipes can also contain fragrance ingredients for a “fresh” and “clean” scent, surfactants that cleanse, and sometimes additional antibacterial ingredients to kill germs. **Here are the top offenders:**

### Multi-Functional Ingredients

**Purpose:** This very diverse group of ingredients can serve many different functions within a formulation: moisturizer, surfactant, binder, emollient, penetration enhancer, emulsifier, or other functions. PEGs, siloxanes, and silanes are ingredients of concern than can serve multiple functions within a formulation.

#### Chemicals of Concern: PEGs

**What are they?** PEG stands for polyethylene glycol, which is manufactured using ethylene oxide in a process called ethoxylation.

**The concern:** Ethoxylation can result in the ingredient being contaminated by carcinogens 1,4-dioxane and ethylene oxide.

**On labels:** PEG compounds often appear notated as PEG followed by a number (ex. PEG-40) or as PEG followed by a number and then another ingredient (ex. PEG-20 Cocamide)

**Avoid:** Any ingredient containing “PEG” in the name.

The concern, in short:  
**Cancer**

### Toxic Ingredients AT-A-GLANCE

Conventional wipes can contain toxic ingredients associated with negative health



impacts. These include PEGs (which may contain a contaminant associated with cancer), siloxanes and silanes (potential for endocrine disruption and associated with harm to the environment), fragrance ingredients (many associated with cancer, developmental toxicity and more, but because they're undisclosed, it's impossible to know what you're being exposed to). Wipes can contain other toxic ingredients, too.



## Chemicals of Concern: Siloxanes and Silanes

**What are they?** Siloxanes are a chemical group that form the backbone and building blocks of silicones. Silanes are modified silicone compounds.

**The concern:** Many siloxanes are [persistent in the environment](#), and some are being evaluated by the European Union to potentially be classified as Persistent-Bioaccumulative-Toxic. [Some ingredients](#) from this group are known to be endocrine disruptors, which means they interfere with normal hormone function. Some are also known to be toxic to aquatic life.

There are some [data gaps](#) with these ingredients, but existing information makes them chemicals of concern. Siloxanes are often found on many restricted lists from authoritative bodies around the world.

**On labels:** Look for the terms “siloxane” or “dimethicone” as suffixes (ex: Amodimethicone).

**Avoid:** Any ingredient containing the terms “siloxane” or “dimethicone.”

The concern, in short:  
Potential for endocrine  
disruption and harmful to  
the environment.

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## Fragrance Ingredients

**Purpose:** To provide scent or to mask the undesirable scent of other ingredients.

**What is it?** “[Fragrance](#)” is an umbrella term for what can be anywhere from a few ingredients to more than 100 ingredients, combined to make up a scent. Companies are legally allowed to keep fragrance ingredients secret because they’re deemed [trade secrets](#) by the FDA. This secret status exempts them from listing on product packaging.

The concern, in short:  
Fragrance ingredients can  
be known carcinogens,  
endocrine disruptors,  
developmental toxins,  
neurotoxins, and more.

**The concern:** Their identity is secret because fragrances are often simply listed as “fragrance” or “parfum” on product labels. Sometimes fragrances are even secret to the companies making scented products, as they often buy fragrance formulations from fragrance houses who don’t disclose the ingredients to the company. This means that many companies don’t even know what’s in the fragrances

within their own products. This industry norm of secrecy, along with the FDA classification of fragrance as trade secret, results in consumers who are left in the dark about what's inside "fragrance."

Without information about the ingredients that actually make up fragrances, it is impossible to know the true extent to which our health may be compromised by them. What we do know about many [fragrance ingredients](#) is troublesome. They can be known carcinogens, endocrine disruptors, developmental toxins, neurotoxins, and more.



**On labels:** "Fragrance," "eau de toilette," "parfum," "scent," "natural scent," and more.

**Avoid:** Products that contains undisclosed fragrance ingredients. You can spot undisclosed fragrance, if the label contains "fragrance," "eau de toilette," "parfum," "scent" or another similar phrase.

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## Dishonorable Mentions

**There are a number of other chemicals of concern that can be found in wipes. We recommend checking labels in order to avoid them:**

### Parabens

**The concern:** Endocrine disruption, cancer.

**Look for & avoid:** Ingredients with "[paraben](#)" as a suffix in the name (ex: methylparaben)

### Vitamin A

**The concern:** Developmental toxicity.

**Look for & avoid:** [Vitamin A](#), as well as the prefix "retin" in the ingredient name (ex: retinyl and retinoic)

### Antibacterials

**The concern:** Toxicity to aquatic life and/or endocrine disruption

**Look for & avoid:** "[Antibacterial](#)" [Triclosan](#) and silver compounds

## 3. Flushability

While the flushability of wipes isn't an issue of toxicity or safety, it's still worth mentioning. Wipes are often marketed as "flushable," even though they're truly not (ask any parent who has flushed wipes at home!). They wreak havoc on sewer systems, congealing to form giant blockages.

These blockages are often called "fatbergs" because wipes often congeal with cooking grease that has been washed down the drain. And while the name may seem funny, their consequences can be very serious. The removal of blockages and other issues in sewer systems caused by flushing down wipes is expensive for cities. For example, between 2010 and 2015, New York City spent **more than \$18 million** on repairs related to flushing wipes down the toilet!

It's possible that your city or town is also spending big taxpayer money on damages from flushing wipes.

Campaigns like "[Respect the Flush](#)," [#FlushMeNot](#), "[Wipes Clog Pipes](#)," and "[Defend your Drains](#)" are popping up in cities, towns, and regions across the U.S.

[Some cities](#) are even investing in enormous grinders to break down wipes before they head into wastewater treatment plants. But the problem with this tactic is that because most wipes are made of plastic, grinding them down expedites the process of the wipe breaking down into microplastics. ([For more on microplastics, see "Plastic Pollution."](#))

The bottom line is that wipes should never be flushed, even if they're labeled flushable. Some industry movers and shakers are innovating [truly flushable wipes](#), but unless you're certain you're buying one of these products, throw it in the trash. (And don't forget to properly dispose of your cooking grease, too!)



### Flushability AT-A-GLANCE

**Even though many wipes are marketed as "flushable," they can decimate sewer systems and congeal with cooking fat and other substances to form giant blockages. Dealing with these blockages, often called fatbergs, can cost cities and towns millions of taxpayer dollars.**



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## Tips for Safer Wipes

- Pitch the plastic. PET, polyester, and polypropylene are all essentially plastic textiles and are not typically biodegradable.
- Choose wipes that are labeled as biodegradable and compostable at home (as opposed to in industrial facilities).
- Don't flush wipes down the toilet, even if the packaging says they're "flushable."
- Skip wipes that contain toxic ingredients. How to spot a toxic ingredient? [Print out our shopping cheat sheet on page 10.](#)
- Choose 100% organic cotton wipes.
- Opt for 100% bamboo wipes, if you know they've been processed without toxic chemicals.
- Shop for [MADE SAFE certified wipes](#), which are made of clean-sourced and manufactured bamboo or organic cotton and made without the ingredients known to be toxic to humans or animals listed in this report, as well as [numerous other](#) potentially toxic ingredients.

### Top Concerns with Wipes

#### ▶ **Plastics**

Often made of PET, polypropylene or cotton woven with plastic resins. Pollution from plastic is a threat to oceans and humans. Plastic can break down into microplastics which can be consumed by aquatic animals, including seafood eaten by people.

#### ▶ **Toxic Ingredients**

Wipes can contain harmful ingredients like PEGs, siloxanes and silanes, "fragrance," and more.

#### ▶ **Flushability**

Even though many wipes are marketed as "flushable," they can decimate sewer systems by congealing to form giant blockages.



Take a screenshot of this page with your phone and bring along with you to the store!

## MADE SAFE's Guide to Shopping for Safer Wipes

**Avoid Toxic Ingredients. How to spot a toxic ingredient? Start by avoiding the biggies listed below:**

- ☑ PEGS: Avoid ingredients with "PEG" in the name
- ☑ Siloxanes and silanes: Avoid ingredients containing terms or suffixes like "siloxane" and "dimethicone"
- ☑ Fragrance: Avoid "fragrance," "parfum," or "eau de toilette" on labels.
- ☑ Parabens: Avoid ingredients containing the suffix "paraben."
- ☑ Vitamin A: Avoid ingredients with the prefix "retin" in the name as well as Vitamin A.
- ☑ Antibacterials: Avoid triclosan and ingredients with "silver" in the name.

**Choose safe wipe materials. Here's what to look for:**

- ☑ Certified organic cotton.
- ☑ Bamboo. Note that bamboo can be tricky. It's hard to know whether or not it's been manufactured with toxic ingredients. We recommend looking for the MADE SAFE seal on bamboo wipes.
- ☑ Choose wipes that are labeled as biodegradable and compostable at home (as opposed to in industrial facilities).
- ☑ MADE SAFE wipes not available near you? See options below that can be ordered online and in bulk.



### TIP:

Add your favorite organic essential oil to unscented **MADE SAFE certified baby wipes** to create your own nontoxic household cleaning wipes! We like lemon, tea tree, or peppermint essential oils for cleaning (check out MADE SAFE certified **Buhbli Organics** essential oils). To turn up the cleaning power, add a little vinegar too. Use on surfaces, car dashboards, airplane tray tables, and beyond!

## Look for MADE SAFE Certified Wipes!

### Baby Wipes:

- Caboo Bamboo Baby Wipes  
Available on [Amazon](#), and [select retailers across the U.S. and Canada](#).
- Natracare Organic Baby Wipes  
Available on [Amazon](#), [select retailers across the U.S.](#) and [worldwide](#), as well as numerous online retailers.
- Mamaearth Organic Bamboo Based Baby Wipes  
Available in on [Amazon India](#), [online](#), and in [Mamaearth stores](#). (India only.)

### Household Cleaning Wipes:

- Stay tuned for new MADE SAFE certified cleaning wipes coming soon!



**caboo**

**natracare**

**mamaearth**