

# How Long Does Plastic Take to Break Down?

The Estimated Decomposition Rate of Plastics in Our Oceans

## Soda Bottle

Polyethylene terephthalate (PET)



450-1,000 years

Up to 56 million tons of PET are produced each year. Recycling PET can reduce its environmental impact by 61.7 %

## Plastic Grocery Bag

High-Density Polyethylene (HDPE)



10-100 years

Plastics don't biodegrade; they are broken down into tiny pieces that float in the ocean. They may photodegrade in sunlight after five centuries.

## Detergent Bottle

High-Density Polyethylene (HDPE)



500-1,000 years

Typically, thicker HDPE plastics break apart into pieces smaller than a paper clip, floating to the top of the ocean.

## Drinking Straws

Polypropylene (PP)



100-500 years

If placed end to end, the amount of straws used in the U.S. in a single day could circle the globe two and a half times.

## Toothbrushes

Polyamide (PA)



500+ years

Toothbrushes are typically made of hard plastics and nylon.

## Yogurt cups

Polypropylene (PP)



100-500 years

In 2016, a celebratory Yoplait cup for the 1976 Olympics washed up on shore, reminding us all how plastic is here to stay.

## Styrofoam Cup

Extruded Polystyrene Foam (XPS)



50-500 Years

Mealworms can live on a diet of Styrofoam (34-39 milligrams a day).

## Old Polyester Clothes

Polyester, Rayon, Acrylic, or Spandex



20-200 years

Microfibers were found in 80% of sampled U.S. fish and shellfish. Worldwide, they're six times more abundant than larger plastic debris.

Creates microfibers, which end up in the stomachs of fish and mussels, often killing them.

## Sandwich Baggies/ Thick Plastic Bags

Low-Density Polyethylene (LDPE)



500-1,000 years

As with many on this list, the plastic needs to be exposed to light; if it's in the bottom of a landfill, it may remain indefinitely.

## Bottle Cap

Polypropylene (PP)

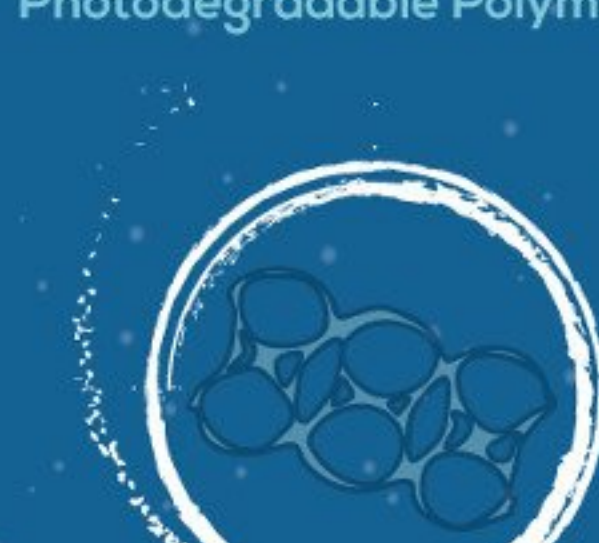


100-500 Years

Caps typically float, so they're swallowed by seabirds looking to catch prey. The plastic lasts long after the bird dies and decomposes.

## Six-Pack Plastic Beverage Holders

Photodegradable Polymer



90 years

As of 1989, in the U.S., six-pack rings were required to be 100% photodegradable so that they would disintegrate after a few weeks.

## Cigarette Butts

Cellulose Acetate Fiber



10-15 years

Making up 1.69 billion pounds of trash each year, cigarette butts are the most often discarded piece of waste worldwide.

## Disposable Diapers /Sanitary Pads

Polypropylene (PP) and other plastics



250-500 Years

Up to 20 billion diapers are dumped each year, and a single woman in her lifetime will throw out 62,415 pounds of feminine hygiene products.

## Monofilament Fishing Line

Polyamide (PA)



600 years

Birds, fish, and crustaceans can get tangled in the flexible nylon centuries after you went fishing.

Remember: **Plastics don't biodegrade.** They either photodegrade (from sunlight) or they degrade into smaller and smaller pieces.

**Microplastics** (5 mm or smaller) create what's referred to by scientists as a "plastic soup" in the ocean.

Great **garbage islands** about the size of Mexico have been found floating in the Pacific.

That's especially scary since some estimate that **70% of man-made wastes sink.**

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