

Plastic Bags

About Plastic Bags

There are two major types of plastic bags – the lightweight, checkout-style bags commonly found in supermarkets and takeaway outlets (made from high density polyethylene or HDPE) and the heavier, tougher plastic bags found in boutique stores (made from low density polyethylene or LDPE).

Every year, Australians use about 3.9 billionⁱ lightweight checkout-style bags.

Environmental Impacts

Plastic bag litter has a devastating effect on wildlife. Tens of thousands of whales, birds, seals and turtles are killed every year from plastic bag litter in the marine environment as they often mistake plastic bags for food such as jellyfish. On land, plastic bag litter can trap birds and kill livestock.

Once eaten, plastic bags cannot be digested by animals so they remain in the gut and may prevent food digestion, leading to a very slow and painful death. As plastic bags can take years to break down, the plastic is re-released into the environment when the animal dies and decays. Over time, a single plastic bag could kill multiple animals.

What about 'Biodegradable Bags' and 'Degradable Plastic Bags'?

Biodegradable and degradable plastic bags are not a solution to the issues surrounding single-use bags, even though biodegradable bags are made from renewable resources.

What Is A Biodegradable Bag?

Biodegradable bags are not made of plastic (that is, they are not made from petroleum products). Instead, they are commonly made from polymers derived from wheat or corn starch. Under certain conditions, these bags will break down into molecules such as carbon dioxide, water and methaneⁱⁱ, as a result of microbiological processes. Currently there are no mandatory standards in Australia regulating the timeframe in which a biodegradable bag must fully biodegradeⁱⁱⁱ; however, compostable bags generally refer to biodegradable bags that will biodegrade within 6 months^{iv}.



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What Is A 'Degradable Plastic Bag'?

A 'degradable plastic bag', also known as an 'oxo-degradable plastic bag', is not the same as a 'biodegradable bag'. Oxo-degradable plastic bags differ from conventional plastic bags because metal compounds have been added to the plastic to accelerate their degradation. The degradation process involves chemical breakdown by the action of oxygen, ultra-violet light and/or heat, which weakens the plastic until it becomes brittle and fragments into smaller pieces. This process may take up to 5 years to occur. Oxo-degradable bags cannot be composted.

Australia has no mandatory standard on biodegradability or degradability for plastic bags; however, manufacturers can choose to comply with the voluntary Australian standard (AS) 4736–2006 Biodegradable plastics—Biodegradable plastics.

Are biodegradable and degradable plastic bags the answer?

Biodegradable bags and oxo-degradable plastic bags do not provide a comprehensive solution to the issue of single-use bags because:

- Replacing conventional plastic bags with biodegradable bags or oxo-biodegradable plastic bags will not solve the problem of bag litter.
- Until they have fully degraded, biodegradable bags and oxo-degradable bags still pose a significant threat to animals that ingest bags or pieces of these bags.
- Biodegradable bags and oxo-degradable plastic bags are not suitable for recycling in mainstream recycling systems as they contaminate the recycling process.
- At present, most Australians do not have access to the type of kerbside recycling service for food scraps that can accept biodegradable bags for composting. However, where such facilities and services are available, compostable bags have played a very beneficial role in improving organic material recovery rates, especially for kitchen scraps.
- If biodegradable bags are sent to landfill, they break down under anaerobic conditions to produce methane, a greenhouse gas with a warming capacity 21 times more powerful than carbon dioxide.
- The environmental impact of oxo-degradable plastic after it has fragmented to small fragments or powder has not yet been determined.
- It can be difficult for consumers to distinguish between different types of single-use bags.

How can I tell if a bag is conventional plastic, biodegradable or degradable?

It can be difficult to tell if a bag is made from conventional plastic, biodegradable materials or oxo-degradable plastic. Some bags may be labelled as '100% degradable and recyclable' or as 'This bag is



made of 100% biodegradable plastic', however these claims are often confusing and incorrect. If unsure, you can try asking your retailer or the manufacturer for information – or better still, avoid using plastic bags whenever possible.

Go Plastic Bag Free!

The best action you can take for the environment on this issue is to reduce your use of single-use bags, by using and reusing long-life reusable bags. In situations when a disposable bag is absolutely necessary, a biodegradable bag made from renewable resources is a better option than a conventional plastic bag.

- Use reusable bags or a backpack for your shopping. Most supermarkets sell reusable 'green bags'. Although they are still made from polypropylene, a type of plastic, they provide greater environmental benefits than many other reusable bag options^v - as long as you remember to reuse them!
- Instead of putting your household garbage in plastic bags, put dry or clean items, like plastic wrapping, straight into your bin. For wet or smelly garbage, such as non-compostable food scraps, try to reuse old bread bags, the bags from inside cereal boxes or even a sheet of newspaper. And don't forget to keep recyclable items out of your garbage altogether – put them in your recycling bin instead.
- Reuse any plastic bags that you do have.
- Encourage your town or council to go plastic bag free, and/or implement plastic bag reduction actions such as a community bag-share program. See our [Tips for Councils and Towns page](#) on PlasticBags.PlanetArk.org for more information, including case studies of towns that have made the change.

Recycling Plastic Bags

Take your plastic bags (both HDPE and LDPE) to major supermarkets such as Coles, Woolworths, Franklins or Safeway for recycling – look for the plastic bag recycling collection bin at the front of the store. To find plastic bag recycling locations in your area, visit RecyclingNearYou.com.au and search for 'Plastic shopping bags'. Torn or damaged reusable 'green bags' that can no longer be reused can also be placed in these collection bins.

Plastic bags and biodegradable bags should not be placed in your kerbside recycling bin at home as they can interfere with the machinery at recycling sorting facilities as well as the sorting process.



Action by State and Territory Governments

The following individual States and Territories have already taken action to ban the supply of lightweight, single-use HDPE plastic bags in retail outlets.

- In South Australia a ban has been in place since 2009. The SA government estimates that there are almost 400 million less plastic bags in SA every year as a result of the ban. For more information visit www.zerowaste.sa.gov.au/plastic-bags
- In the Northern Territory a ban took effect from 1 September 2011. For more information visit www.greeningnt.nt.gov.au/plasticbagban/index.html
- In the Australian Capital Territory a ban took effect from 1 November 2011. For more information visit http://www.environment.act.gov.au/waste/plastic_bags

These bans do not apply to biodegradable bags, compostable bags, or barrier bags which are dispensed from a roll to hold items such as fruit and vegetables.

More information

Planet Ark's [Plastic Bag Reduction website](http://PlasticBags.PlanetArk.org) (PlasticBags.PlanetArk.org) contains much more information on plastic bags and plastic bag reduction, including Frequently Asked Questions; handy tips for consumers, retailers and councils; research reports; local and global case studies and more.

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ⁱ Department of Sustainability, Environment, Water, Population and Communities website (environment.gov.au/settlements/waste/plastic-bags/index.html, accessed 26/9/11). Statistic from 2007.

ⁱⁱ Clean Up Australia website

(cleanup.org.au/au/Whatelsewesupport/faq1.html, accessed 26/9/11)

ⁱⁱⁱ 'Biodegradable, degradable and recyclable claims on plastic bags'. Australian Competition and Consumer Commission, 2010.

^{iv} EV0422: Assessing the Environmental Impacts of Oxo-degradable Plastics Across Their Life Cycle: Report to the Department for Environment, Food and Rural Affairs, January 2010. Loughborough University.

^v 'Comparison of Existing Life Cycle Analysis of Shopping Bag Alternatives.' A Report for Sustainability Victoria by Hyder Consulting, April 2007.



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