

Not all "biodegradable" plastics are created equal

know what the labels really mean

BioGone landfill-biodegradable label means plastics will biodegrade in landfill within 1-5 years

When 5 billion shopping bags are used in Australia each year with only 3% being recycled and 75% going to landfill, the importance of biodegradable plastics as a solution to reducing waste becomes apparent.

Certainly, refusing and reusing is preferred, which is what the ban on single use plastic bags in Australia wants to achieve. However, if you do use plastic bags but still want to reduce your environmental footprint, take a few minutes to learn what the different product labels mean so you can make the right choices.

Most importantly, be wary of any claim of being "Biodegradable" if there are no details on where it will biodegrade and why it is biodegradable. A good first step is to ask yourself "where do I dispose of it until it biodegrades away?"

Bioplastics – made from plant-based materials. Only a small portion of bioplastics are biodegradable, most of which require a municipal or commercial compost facility to actually biodegrade. And they cannot be recycled.

Compostable plastics – refer to "biodegradable" plastics made from plant-based materials like corn and wheat starch which will only biodegrade if composted in a municipal or commercial compost facility. PLA or Polylactide for example is a compostable plastic. Unfortunately, there are not many composting facilities available or accessible in Australia. In fact, there is no existing infrastructure to separate compostable plastics from other waste or to transport them to such facilities, resulting in them going to landfill. "Compostable plastic" will not biodegrade in landfills as they are too cool. They also cannot be recycled.

Degradable plastics – has nothing to do with biodegradation and microorganisms. "Degradable" or sometimes called "oxo-degradable" plastics use a metallic additive that sets off a slow chemical reaction and over 12-24 months will cause the plastic to fragment into little pieces. So, instead of one piece of plastic we end up with hundreds or thousands of little pieces of plastic which may not be visible, but a worse result for the environment particularly when marine animals easily consume these fragments. "Degradable" plastics cannot be composted or recycled.

Landfill biodegradable plastics – incorporate an organic food source additive in the plastic at the time of manufacture. When disposed to a landfill they attract naturally occurring microbes that exist in there. The microbes seek out the food and in the process the enzymes they secrete break down the long polymer molecules where they can be digested too. The resulting products of the biodegradation are a biogas and a biomass (humus). There is no plastic residue left or any toxic constituents. "Landfill biodegradable" plastics can be recycled. They can also be composted in a municipal or commercial compost facility. Their results are verified by various ASTM testing methods.

NOTE: No plastic is good in the ocean. There are no microbes present there to biodegrade the material away.

END

Dr Ross Headifen is Vice-President of Beach Patrol, the largest volunteer group picking up rubbish across Victoria and co-founder of BioGone.

Ross has a PhD in mechanical engineering specialising in prototype machine development. Following a 13-year career in the contaminated land and similar industries involving water quality and soil contamination, he moved to Tanzania with his wife where they volunteered to work with local drillers to install water bores in rural villages to alleviate the suffering of women who spent countless hours each day looking for water.

Upon his return to Melbourne, he met and joined the first beach patrol groups in Albert Park and Port Melbourne, later instigating a widespread beach patrol movement across Victoria that now includes 31 local communities.

In 2012, Ross established FieldTech Solutions with co-founder John Mancarella to develop a suite of landfill-biodegradable products specifically for the groundwater and soil sampling industry. Quickly realising that there were no environmentally friendly packaging options while shipping out orders using stretch wrap, packing tape and envelopes, the duo decided to create their own landfill biodegradable plastic packing products. In November 2016, they established BioGone to make their landfill biodegradable plastic products available to like-minded consumers and commercial organisations.

He continues to campaign for a Cash for Container scheme in Victoria to reduce plastic in our waterways and diverting some 124,000 tonnes of materials from landfill each year.

www.biogone.com.au

Media contact: Ping Chew 0439 570 789

Contacts

Ping Chew

0439 570 789

mailto: ping@pingcontent.com.au