

Ball & Doggett

IMPORTANCE OF UNDERSTANDING: PLASTIC WASTE AND RECYCLING

There are social, environmental, and economic consequences surrounding our current waste generation and disposal habits. Plastic recycling is critical, both as a method to deal with our existing waste and as a component of both circular economy and zero-waste systems that aim to reduce waste generation and increase sustainability.

Differences in Plastic Substrates:

Polypropylene (PP)

- A thermoplastic polymer used in a wide variety of applications.
- PP is one of the most recyclable plastics.
- The product is in global demand because it can do things other plastics cannot.

PET

- PET stands for polyethylene terephthalate.
- PET is completely recyclable, and is the most recycled plastic in the world.
- PET plastic is approved as safe for food and beverage contact by FDA.
- PET falls under the category of thermoplastic resin and is a type of polyester.
- PET is strong and impact resistant and heat stable.

PVC

- PVC stands for polyvinyl chloride.
- Evidence suggests that, throughout its entire lifecycle, PVC is responsible for a greater share of the world's annual dioxin burden than any other industrial product.
- PVC is the most dangerous plastic from an environmental aspect, as it releases dioxin, dioxin related chemicals and chlorine.
- Dioxin is known as one of the most dangerous chemicals ever produced.
- The entire life of PVC, from its production, use and disposal releases toxic, chlorine based chemicals that get into our air water and food.

Challenges Surrounding Recyclability of Plastics

- The main constraints and challenges to plastics recycling are:
 - Logistics / infrastructure of picking up the plastic.
 - Access to local recycling facilities.
 - Cost of recycling plastics.

Sustainable Solutions to Replace Landfill

Below are a list of three key sustainable solutions to avoid plastics going to landfill.

1. Recycling.
2. Reuse, reduce and recycle.
3. Recycling in to another product or in to a new raw material.

Biodegradable and Compostable Plastics

The ability to decay naturally and in a way that is not harmful to the environment.

Biodegradable Plastics

- Most biodegradable and compostable plastics are known as bioplastic and they are generally made from plants (such as bamboo or sugarcane) rather than fossil fuels.
- Plastics such as single use bottles (PET) photodegrade and not biodegrade. Photodegrade means tiny pieces of plastic are left behind which will reach our drinking water and harm our wildlife.
- Plastic that is designed to break up when exposed to the presence of microorganisms.
- These plastics can leave behind toxic residue.

Compostable

- Refers to a material capable of breaking down into carbon dioxide, water, and biomass.
- Compostable plastic will not biodegrade in a landfill.
- Compostable plastic must disintegrate and become indistinguishable in the compost and cannot leave any toxic material behind.
- These special plastics need air, moisture and sunlight to break down properly and unfortunately, landfills tend to entomb waste and deprives it from these necessary environmental conditions.

For further information regarding the recycling of plastic waste or alternate environmentally sustainable solutions, please feel free to contact us at displayandvisual@ballanddoggett.com.au

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