

# Plastic Information Sheet

***The world's annual consumption of plastic materials has increased from around 5 million tonnes in the 1950s to nearly 100 million tonnes today.***

*Estimated number of all types of plastic bags used each year, world-wide: 4,000,000,000,000*

*Percentage of plastic bags returned for recycling: 1*

*Barrels of oil required for US annual plastic bag consumption: 12,000,000*

*Number of marine animals killed each year due to plastic bags: 100,000*








*Average number of pieces of plastic in each square mile of ocean: 46,000*

*Annual revenue generated by Irish bag tax: €10,000,000*

*Number of plastic bags prevented by the Irish bag tax, annually: 1,000,000,000*

## Types of Plastic

There are about 50 different groups of plastics, with hundreds of different varieties. All types of plastic are recyclable. To make sorting and thus recycling easier, the American Society of Plastics Industry developed a standard marking code to help consumers identify and sort the main types of plastic. These types and their most common uses are:

	PET	<b>Polyethylene terephthalate</b> - Fizzy drink bottles and oven-ready meal trays.
	HDPE	<b>High-density polyethylene</b> - Bottles for milk and washing-up liquids.
	PVC	<b>Polyvinyl chloride</b> - Food trays, cling film, bottles for squash, mineral water and shampoo.
	LDPE	<b>Low density polyethylene</b> - Carrier bags and bin liners.
	PP	<b>Polypropylene</b> - Margarine tubs, microwaveable meal trays.
	PS	<b>Polystyrene</b> - Yoghurt pots, foam meat or fish trays, hamburger boxes and egg cartons, vending cups, plastic cutlery, protective packaging for electronic goods and toys.
	OTHER	<b>Any other plastics</b> that do not fall into any of the above categories. - An example is melamine, which is often used in plastic plates and cups.

## Benefits of plastics

The considerable growth in plastic use is due to the beneficial properties of plastics. These include:

- Extreme versatility and ability to be tailored to meet very specific technical needs.
- Lighter weight than competing materials, reducing fuel consumption during transportation.
- Extreme durability.
- Resistance to chemicals, water and impact.
- Good safety and hygiene properties for food packaging.
- Excellent thermal and electrical insulation properties.
- Relatively inexpensive to produce.

## Why Bother?

An estimated 56% of all plastics waste is used packaging, three-quarters of which is from households. It is estimated that only 7% of total plastic waste are currently being recycled.

The production and use of plastics has a range of environmental impacts. Firstly, plastics production requires significant quantities of resources, primarily fossil fuels, both as a raw material and to deliver energy for the manufacturing process. It is estimated that 4% of the world's annual oil production is used as a feedstock for plastics production and an additional 3-4% during manufacture.

In addition, plastics manufacture requires other resources such as land and water and produces waste and emissions. The overall environmental impact varies according to the type of plastic and the production method employed.

The disposal of plastics products also contributes significantly to their environmental impact. Because most plastics are non-degradable, they take a long time to break down, possibly up to hundreds of years - although no-one knows for certain as plastics haven't existed for long enough - when they are landfilled. With more and more plastics products, particularly plastics packaging, being disposed of soon after their purchase, the landfill space required by plastics waste is a growing concern. Plastic waste, such as plastic bags, often becomes litter. For example, nearly 57% of litter found on beaches in 2003 was plastic.

Plastics are used in a wide range of applications and some plastics items, such as food packaging, become waste only a short time after purchase. Other plastic items lend themselves to be reused many times over.

**Reusing** plastic is preferable to recycling as it uses less energy and fewer resources. Long life, multi-trip plastics packaging has become more widespread in recent years, replacing less durable and single-trip alternatives, so reducing waste.

According to a 2001 Environment Agency report, 80% of post-consumer plastic waste is sent to landfill, 8% is incinerated and only 7% is recycled. In addition to reducing the amount of plastics waste requiring disposal, recycling plastic can have several other advantages:

- Conservation of non-renewable fossil fuels - Plastic production uses 8% of the world's oil production, 4% as feedstock and 4% during manufacture.
- Reduced consumption of energy.
- Reduced amounts of solid waste going to landfill.
- Reduced emissions of carbon-dioxide (CO<sub>2</sub>), nitrogen-oxide (NO) and sulphur-dioxide (SO<sub>2</sub>).



Everyone can help to maximise waste recovery and minimise waste to landfill