

PLASTICS 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. We therefore produce and use 20 times more plastic than we did 50 years ago, with plastic being the material of choice in nearly half of all packaged goods.

Plastics are still being developed and improved upon, for example, yoghurt pots have reduced in weight from approximately 12g to 4g since the 1990s.



Benefits

- Extremely versatile and can be tailored to meet very specific technical needs.
- Light weight; reducing fuel consumption during transportation.
- Extremely durable.
- Resistant to chemicals, water and impact.
- Good safety and hygiene properties for food packaging.
- Excellent thermal and electrical insulation properties.
- Relatively inexpensive to produce.

Types

There are about 50 different groups of plastics, with hundreds of different varieties. In theory all plastics can be recycled but will depend on the available technology and markets for the recycled material. A system of identification was produced by the American Society of Plastics to make sorting and thus recycling easier. However, the recycling triangle does not necessarily mean the plastic item can be recycled in West Sussex or by other local authorities.

	Polyethylene terephthalate Fizzy drink bottles, squash and mineral water bottles.		Polypropylene Margarine tubs, ice cream tubs, microwaveable meal trays.
	High-density polyethylene Milk bottles, shampoo, chemical and detergent bottles.		Polystyrene Yoghurt pots, vending cups, plastic cutlery, packaging for electronic goods and toys.
	Polyvinyl chloride Food trays, cling film.		Other Plastics that do not fall into the six other categories. An example is melamine, which is often used in plastic plates and cups.
	Low-density polyethylene Carrier bags and bin liners.		

Manufacture

The production and use of plastics has a range of environmental impacts.

- Requires significant quantities of resources, primary fossil fuels, land and water.
- Produces waste and emissions.
- Involves use of potentially harmful chemicals, added as stabilisers or colourants, for example phthalates.

Disposal

The disposal of plastic products also contributes significantly to their environmental impact. If plastics are sent to landfill they take a very long time to break down, possibly hundreds of years, because they are non-degradable.

Recycling Plastics

Recycling plastics results in the following environmental benefits:

- Two-thirds of the energy needed to manufacture plastics is saved.
- 90% of water used in manufacture is saved.
- Carbon dioxide emissions are reduced by two-and-a-half times.

Plastics Recycling — Frequently Asked Questions

What plastics can I recycle in West Sussex?

Currently residents can recycle **Plastic Bottles Only**. Most bottles are made from PET, HDPE and PVC. There are two key questions you need to ask yourself: "Is it plastic?" and "Is it a bottle?"

If the answer is yes to **both** of these questions then put the plastic bottle in your recycling bin/box. If in doubt, leave it out.

Does it matter what colour plastic bottle I put in my recycling bin/box?

Brown and black plastic bottles are unsuitable for recycling because of a nylon interlayer in brown bottles and the difficulty in selling black plastic.

Should I remove lids from the bottles?

Yes, lids are often made from a different type of plastic to the rest of the bottle and will therefore have different chemical properties. If the two are recycled together chemical reactions occur affecting the end product. As the lid is screwed on to the bottle it becomes difficult to remove automatically and so can readily contaminate the plastic by mixing the two types together.

Do I need to wash out my plastic bottles?

Yes, after using your plastic bottle it should be rinsed out in used washing-up water to remove any liquid residue still in the bottle. As well as providing a clean material for plastic recyclers you will also help to prevent food contamination on other recyclables such as paper and card, which would make them unsuitable for recycling.

Why can't I recycle non-bottle shaped items like margarine tubs, yoghurt pots, food trays etc?

These items (PP and PS) are unsuitable for recycling as they are not clean; often contaminated with food debris. Consequently there are no secure, sustainable markets available for recycling post consumer packaging such as yoghurt pots and margarine tubs. A limited number of reprocessors who accept PP and PS only accept clean production scrap for recycling.

However a government body, WRAP (Waste and Resources Action Programme), has been set up to create and develop stable and efficient markets for recycled materials. It is likely that in the future more and more plastics will be able to undergo reprocessing.

Why don't you just sort out plastic bottles from all the other plastics?

Sorting materials for recycling can be an expensive and difficult exercise. For example, it is much easier to separate an aluminium can from a plastic bottle than it is to separate a fizzy drink bottle from a plastic food tray.

Also without the availability of a secure and stable market for other types of plastic we would be wasting not only your time in collecting but also money in sorting out the plastics only to dispose of some in landfill.

Where do my plastic bottles I send for recycling end up?

After the contents of your recycling bin/box are collected from the kerbside the material is sorted at a Materials Recovery Facility into the separate material streams. Plastic bottles are then sent off either to be:

Reformed — whereby plastic is melted down and reformed into new material e.g. fibres for fleeces, pillows or new plastic bottles.

Reprocessed — whereby more brittle plastics are transformed into new plastic products such as recycled plastic furniture.

Plastics can be recycled into all kinds of materials, including polyethylene bin liners and carrier bags; PVC sewer pipes, flooring and window frames; building insulation board; fencing and garden furniture; water butts and composters; anoraks and fleeces; fibre filling for sleeping bags and duvets.

I've seen television programmes where waste is illegally exported, ending up in foreign landfill sites. Can you reassure me that West Sussex does not do this?

The exporting of waste materials is controlled by strict legislation and enforced by the Environment Agency. West Sussex does export some plastics for recycling as this route provides good value and a sustainable outlet for the material. All exports of recyclate from West Sussex comply with all relevant legislation.

The materials that are exported are sent as clean, sorted 'single stream' materials. This means they do not require additional sorting and are sold for reprocessing into new products in the same way as 'virgin' plastics.

What about carrier bags?

Some supermarkets offer plastic carrier bag recycling points but it can be difficult to recycle them because there is no easy way to separate biodegradable and non-biodegradable plastic bags, which cannot be recycled together.

The best solution is to use re-useable or 'bag for life' shopping bags, which reduces the amount of carrier bags in circulation.



October 2006

