

Glossary

Recyclable products

Recyclable products refers to products that are technically recyclable, meaning they can be diverted from landfill by being processed into new products or materials. However, just because a material is recyclable it doesn't mean it will **actually** be recycled. The ability depends on the infrastructure in the country/destination and on the recyclable products being separated and collected accordingly.

Recycled products

Products that are made of recycled content or contain recycled content, that has been recovered from the waste stream. Products containing a high percentage of recycled content are usually more sustainable than products made with virgin materials. It is important to continue to recycle these products after use so they can become new products and materials again and again.

Mixed material products

Mixed material products contain at least two different materials, e.g. juice cartons which are made of paper, plastic and aluminium and takeaway coffee cups which are made from paper with a plastic lining. It is very difficult to separate the layers, even with machinery, that is why these products have a very low recoverability and thus a very low recyclability rate.

Bio-based products

Bio-based materials (i.e. bio-plastic) are made from natural/renewable resources such as corn starch, potato starch or sugar cane instead of fossil fuels. Thus, the production of products made from these materials has a lower environmental impact than the production of products made from fossil resources. However, bio-based materials are not necessarily biodegradable or compostable, moreover, they are not necessarily better for the environment when their full life cycle is considered, and they may not decompose completely.

Biodegradable products

Biodegradable products can be made from bio-based materials or from fossil fuels, the word biodegradable simply refers to the fact that the materials decompose. Decomposition can be by microorganisms (e.g. bacteria) or by environmental surroundings (e.g. sunlight). During the process of decomposition, biodegradable material breaks up into smaller pieces over time, in some cases this can be years so discarded products can still pollute environments and harm wildlife, even when made from biodegradable materials. Biodegradable plastic made from fossil fuels breaks up into harmful microplastic particles if it is not properly disposed of.

Compostable products

Compostable products break down into natural elements and leave no toxins behind when properly disposed of in a composting environment. Compostable products are mostly non-recyclable. There are two types of compostable products: Industrially compostable products and home compostable products. Alas, most products are not labelled accordingly, thus you need to ask the product supplier if the product is industrially or home compostable.

If compostable materials end up in the plastic waste stream they can contaminate the recycling process so it is very important to separate them in advance.

Industrially compostable products

Industrially compostable products will not simply break down like garden waste when discarded in nature or onto compost piles, they require industrial facilities with specific conditions such as high temperature to actually break down. These products should be recognised by standards like the European standard EN 13432 as it ensures the product disintegrates after 12 weeks in an industrial compost setting and completely biodegrades after six months. Not all waste collection companies or facilities accept these products, thus you have to ask. If they are not accepted, it is recommended to avoid these products.

Home compostable products

Home compostable materials can break down when deposited into a compost pile as they don't require industrial conditions, a well-managed compost pile should be sufficient. As these conditions vary depending on the climate (in cooler climates the composting takes longer), you need to ask your local suppliers for further details on the composting. It may be that waste collection companies will collect home compostable products together with organic waste, this should be checked.

Traditional plastic products

Traditional or conventional plastic products are made from fossil fuels, their extraction and production consume a lot of energy and resources. Traditional plastic products are not biodegradable, they will remain intact for many years and will eventually disintegrate into smaller pieces, leaving harmful microplastics behind.

Aqueous coated products

Aqueous coating is water-based and thus breaks down without needing any special conditions nor harming the environment. Paper cups or takeaway containers with an aqueous lining can be put into a paper recycling bin if they are not heavily contaminated with organic residue, otherwise they can be industrially or home composted. The problem is that many paper recycling plants can't identify which cups have aqueous lining and which do not, so they often pull them out and don't recycle them. It is worth speaking to paper recyclers to explain about aqueous lined products to find out if they are accepted at the recycling facility.

PET = Polyethylene Terephthalate

PET is the most commonly used type of plastic worldwide and mostly used for soft drink/water bottles or food packaging. It is easy to recycle and is used to make more RPET bottles. The "R" makes it easy to identify that the material includes recycled content.

HDPE = High Density Polyethylene

HDPE is used for products like plastic milk bottles, juice containers, shampoo bottles and detergent bottles. It is easy to recycle and can be used to make garden furniture amongst other secondary products.

PP = Polypropylene

PP is often used to make single-use products such as plastic straws, disposable cups or bottle caps. It is generally easy to recycle although recycling is limited due to difficulties in collection. It can be used to make clothing fibres or food containers.

LDPE = Low Density Polyethylene

LDPE is used to produce food bags, shopping bags or magazine wrappings and squeezable bottles. It can be recycled though special facilities are needed in order to do so. When recycled it is mostly used to make bin liners or plastic furniture.

PS = Polystyrene

PS is often used to make single-use products such as coffee cups, plastic food boxes or plastic cutlery. It is very difficult to recycle, if it does get recycled it is often used to make more packaging.

References:

- [EuRIC AISBL: Plastic Recycling Factsheet](#)
- [European Environment Agency: Biodegradable and compostable plastics](#)
- [Think Greener: Aqueous coating](#)

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