Inspire



Different types of plastic

Have you ever seen this symbol before?

It's called a Resin Identification Code. These symbols made up of arrows and a number were created in 1988 to help us identify different types of plastic.

Not all plastic is made equal! The different types of plastics each come with their own properties, their own pros and their own cons.



High-density Polyethylene

Examples

Milk and non-carbonated drinks bottles, food packaging, toiletry bottles.

Recyclability

Easily recyclable into new HDPE bottles or plastic lumber and furniture.

Properties

HDPE is a translucent, flexible and tough plastic, and often has a waxy feel. It is resistant to solvents with a high heat resistance with a melting point between 120 and 180 degrees Celsius. This means that it can be sterilised multiple times.

Toxicity

Does not leak any chemicals that cause health issues to animals and humans.

PETE

Polyethylene Terephthalate

Examples

Water and soft drinks bottles, food packaging, medicine containers.

Recyclability

Easily recyclable - commonly recycled into fleece, carpets and stuffing. This could be called down-cycling to be strict.

Properties

High heat resistance. High melting point of 255°. Clear and tough. Solvent resistant.

Toxicity

Does not leach chemicals to the drinks and food being stored in it. However, it may release toxic chemicals when used for a long time.

PVC Polyvinyl Chloride

Examples

Window and door frames, pipes, guttering, synthetic leather products.

Recyclability

Not recyclable. Can be repurposed but use by children or with food is inadvisable.

Properties

PVC is a white, brittle and durable plastic and is increasingly replacing traditional building materials. Heat distortion can start at 60 degrees Celsius with melting occurring from 100 degrees Celsius.

Toxicity

Contains high doses of toxic chemicals that can harm living things when ingested chemicals when used for a long time.







Low-density polyethylene

Examples

Bubble wrap, packaging films, shopping bags, rubbish bags.

Recyclability

More recycling programmes are beginning to accept LDPE plastics turning then into items such as flooring, bubble wrap and waste bins.

Properties

Ease of processing. Strong and tough. Low melting point.

Toxicity

Very safe and not known to produce any harmful chemicals.



Examples

Food boxes and trays, disposable cups, packaging.

Recyclability

Very rarely recycled; structure can't withstand the process and toxicity rises with heat and liquid treatment.

Properties

Versatile and inexpensive. Good insulator. Easily formed. Glassy surface, high melting point.

Toxicity

Has been shown to damage neuro function and cause disease.



Examples

Bottle tops, ketchup bottles, plant pots, drinking straws.

Recyclability

Can be reused and recycled into battery cases, bins and trays.

Properties

Excellent resistance to heat, chemicals, grease and oil. Strong and tough, high melting point.

Toxicity

Very safe and not known to produce any harmful chemicals.



Examples

Nylons, cups, bottles, construction materials, fiber textiles

Recyclability

Very rarely recycled. Check if product has code PLA next to number as this means it is compostable.

Properties

Other polymers with a wide range of uses particularly in the engineering sector.

Toxicity

Has been shown to have negative effects on the endocrine system.

Kids Against Plastic and Common Seas