

Guide

Plastic selection with a circular approach

- less consumption and less waste



Easily set the right requirements when purchasing or tendering for products containing plastic

Welcome

This guide is intended as a simple aid to making the right climate-friendly choice when purchasing products or packaging containing plastic. The guide is also a simple guide to the considerations you need to make when we work together to recycle our products so that we can achieve the goal of reducing our consumption and waste. We need to change and challenge what we USUALLY do!

Target group:

- ANYONE who buys or supplies products containing plastic
- EVERYONE who takes responsibility for circular procurement by reusing resources and reducing consumption and waste

The guide is a reference tool. Here you can see:

- **Plastic types:** Which plastic types you should ask for to ensure a climate-friendly choice
- **Life cycle:** Illustration of the life cycle with recommendations for considerations that support the circular process
- **Insineration/loss:** Examples of how resources should be sorted into the 10 waste types specified by law after use (2023)
- **Facts:** An overview of the different types of plastic and the importance of using the right types of plastic for the given products in the given situation

Enjoy the guide!

The circular process

We need to:

- Use what we already have
- Repair what is broken
- Share with others by borrowing or renting
- Demand products made with recycled materials
- Find alternatives to single-use products
- Choose good quality that lasts
- Choose products that can be repaired over time
- Buy second-hand instead of new

The circular process supports these global goals:



Recycled plastic in the product

Where possible, look for products that consist wholly or partly of recycled plastic, sometimes referred to as *reuseplastic**, as this saves CO₂:

- Society saves approx. 2.5 kg CO₂ for every kg of plastic that is recycled. The savings arise from a combination of reduced supply of new raw materials and less plastic for incineration

The plastic may be marked with a triangle symbol, but this does not necessarily mean that the product contains recycled plastic.



- The symbol means that the product should be recycled
- The text below the symbol may contain an "R" e.g. "RPET"^{**}
- R stands for "recycled", meaning that the product consist entirely or partly of recycled plastic
- The declaration may also state that x % recycled plastic has been used in the product

* *Reuseplastic* is not the correct technical term

** Se Fact 1 for an explanation of plastic types

Design and composition

Where possible, demand products designed for reuse and/or recycling:

- Products made of pure materials that are **not** composed of different types of materials such as plastic/paper, paper/cardboard, metal/glass, etc. can be recycled
- PP, PE, PET, PS, EPS (Styrofoam)* and many other uniform types of plastic can be recycled – **once they have been seperated**
- Labels on PP and PE packaging should be made of the same plastic material as the packaging: Avoid labels made of adhesive paper and PVC, as mixing these materials reduces the quality of the recycled plastic.

* See Facts 1 and 2 for an explanation of plastic types

- As far as possible, use packaging that can be collected for recycling in household waste collection (residential bins). This applies to the plastic types PP, PE, and PET
- Request returnable packaging with a return scheme directly from the supplier
- Be aware that alternatives to plastic often have a coating/varnish or similar that may contain inappropriate chemical substances

*A plastic design guide has been produced, which can also be helpful: **Find it here!***



Bio-based plastic

Products made from bio-based plastics can offer certain climate-related benefits, but this depends on the specific materials and the aim to avoid or reduce the use of fossil resources.

Bio-based plastics can be a good solution, but this varies depending on the product and the type of plastic.

What does bio-based plastic mean?

- The plastic is made from an **organic** material. The material has been processed so that it corresponds to "conventional" plastic.
- Bio-based plastic can be produced from production residues or waste materials – known as second- or third-generation bioplastics. However, the organic material used for producing bio-based plastic should **not** contain edible food resources such as corn or sugarcane.
- Bio-based plastic of the same plastic types can be included in existing recycling streams together with conventional plastics. For example, a bio-based PE can be recycled together with conventional PE.
- Bio-based plastic is not the same as biodegradable plastic.

Biodegradable plastic

Myth: "Bioplastic decomposes naturally in the environment"

Fact: Biodegradable plastic must be broken down by microorganisms (bacteria or fungi) and turned into water, biomass, CO₂ and/or methane – in nature this takes an incredibly long time. The plastic can be made from biomass, oil/gas, or a mixture thereof and **cannot** be recycled together with other plastics

Use: Biodegradable plastic is used, for example, at events such as festivals, where an internal system has been established for the collection and return of biodegradable plastic.

In Denmark, we do not have facilities for handling this type of plastic. Therefore, a usable return system must be ensured, e.g. in Germany. Ask which return system the product can circulate in. Consider whether separate collection and return is possible.

Exeptions: We must avoid plastic in nature

However, biodegradable plastic without collection for decomposition plants may make sense when there is an imminent risk of product parts ending up in nature. Examples include: hail protection covers, strips for roadside trees, agricultural plastic, brushes on municipal sweepers, etc.

Other types of plastic

EPS/Styrofoam

- E.g. fish boxes and electronic packaging

Collected for recycling at many recycling centers

Businesses can arrange separate collection of EPS for recycling

Hard PVC

- E.g., gutters and sewer pipes

Collected at recycle centers via the WUPPI scheme

Vinyl

- E.g. floor coverings

In some cases, can be returned via the manufacturer

ABS

- E.g. casings on electronic products

Collected at recycling centers via the producer responsibility scheme

Product examples

Cleaning products

- The packaging can advantageously contain recycled plastic
- Packaging from cleaning agents is often collected for recycling together with other types of plastic
- Request packaging made from recycled PP or PE, which are included in the standard collection systems.

Furniture

- Request furniture that contains recycled plastic – for example plastic from used fishing nets, ropes, or packaging
- Request furniture made from a single material type, or from multiple material types that can be separated and sorted into waste fractions after use – enabling them to be recycled into new products.

Office supplies

- Request uniform plastic types without composite materials
- Request recycled plastic

Take-back of packaging

- Request catering solutions that allow packaging to be returned for refilling or, alternatively, for recycling
- Request solutions made from recycled plastic
- Request reusable products.

The 10 types of waste



To maximize the utilization of product resources, waste must now be sorted into 10 types of waste

Prevention

Create new habits, consume less, and avoid waste

Reuse

Pass things on to others, buy more recycled products, and repair what is broken

Recycling

Sort waste as much as possible

Energy recovery

Green district heating and CO₂-neutral electricity

Landfill

As little as possible

Waste hierarchy

Resources must be moved as high up the hierarchy as possible

Want to know more?

We hope you have enjoyed our guide!

We hope this tool will help you make the right choice of plastic that supports the circular economy.

Want to know more?

You can find more information on the next two pages.

You can read more via the links below, where you will also find our contact details:

[The Plastics Industry](#)

[Aarhus Municipality's Plastic Strategy](#)

Best regards, The Plastics Industry and Aarhus Municipality's Plastics Strategy

Facts about plastic 1

PP plastic – Polypropylene

- Polypropylene is a widely used type of plastic
- It is hard and opaque
- It is used, for example, for packaging for fresh meat, carpets, furniture, ropes, clothing, filters, and pipes.

PE plastic, Polyethylene

- Can be divided into two groups, HDPE and LDPE:
 - **HDPE plastic:** high density polyethylene – used for e.g. water and sewage pipes, bottles, tubs, buckets, and toys.
 - **LDPE plastic:** low density polyethylene – used for e.g. film (soft plastic), carrier bags, and inner lining in cartons.

TPE plastic

- Is used, for example, in the outer coating of plastic wheels and resembles rubber. It can also be used in sealing strips or larger items such as pots and buckets.

PET plastic, Polyethylene Terephthalate

- PET is a widely used material for packaging, for example food products and bottles.
- PET is very well suited for recycling into packaging intended for food contact.

PS plastic – Polystyrene

- Used, for example, for CDs, cups, toys, and other products where a crystal-clear display packaging is desired.

EPS plastic – Styrofoam

- Expanded polystyrene. Used, for example, for insulation, boxes, and protective packaging.

Facts about plastic 2

PVC plastic – Polyvinyl chloride

- Used, for example, in drinking water pipes, downpipes, draining systems, window frames, cable trays, gutters, profiles, and roofing sheets.

R-Plast

- Plastic material manufactured using recycled plastic
- Recycled plastic can come from various sources
- Where possible, PCR will be a priority:
 - **PCR – Post Consumer Recycled plastic:** plastic that has been used by consumers or in businesses and is subsequently recycled
 - **Pre-consumer or post-industrial:** plastic derived from a production process, which is subsequently recycled into new material for other production processes

ABS plastic – Acrylonitrile butadiene styrene

- Used, for example, in cabinets for white goods, telephones, computers, automotive equipment, Lego bricks, and other toys

Useful links

- [Recycling and reuse of plastic packaging for private consumers](#)
- [Sustainable building blocks for the future](#)
- [Use and potential for use of bioplastics in Denmark](#)
- [The great Plastic Encyclopedia](#)

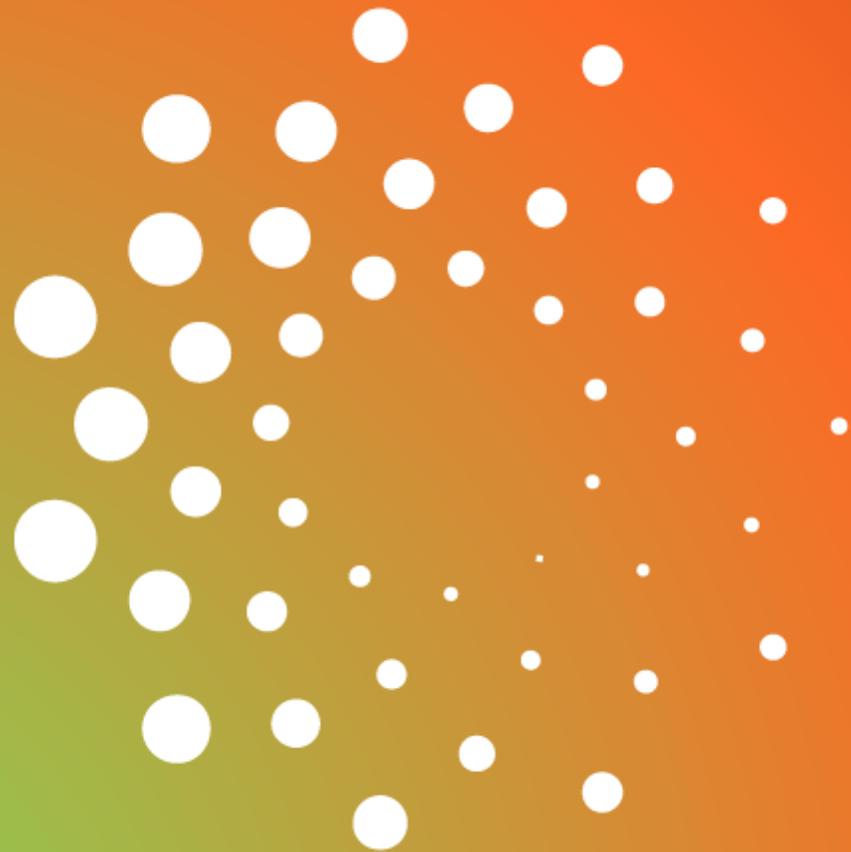
**PLAST
INDUSTRIEN**



Kredsløb



AARHUS
KOMMUNE



En del af
løsningen