



# Plastic packaging in K Group

KESPRO



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# 1. Promoting sustainability with our plastics policy

**Plastic conserves and protects food, reducing food waste, but it causes major problems when it ends up in natural environments and water bodies.**

EU's directive 2019/904 for curbing the harmful impact of certain plastic products on the environment will be implemented in national legislation in July 2021. The objective of Kesko's plastics policy (published 10/2018) is to reduce the use of plastic and promote its recycling.

It is increasingly important to consider environmental issues, recycling and consumer opinions when designing packaging and products. Stricter legislation also places cer-

tain requirements on operators in the retail sector and the EU directives on packaging waste and single-use plastics will have a concrete effect on the day-to-day operations of retail stores.

It is important to understand that promoting better product design, efficient recovery and recycling of plastic and mitigation of the harmful impacts of plastic are globally relevant issues, as well as being a prerequisite for the continuity of operating activity in all industries.

Together with our goods suppliers, we continuously seek new models for introducing easily recyclable or reusable packaging and circular economy products to our selections.

## *What is the plastics policy?*

**The objective of Kesko's plastics policy is to reduce the use of plastic and promote its recycling.**

We will reduce the use of plastic and promote its recycling.

Our objective is that, by the end of 2025, all of the packaging used in our own brand products is recyclable, reusable or biodegradable.

Our objective is to reduce the amount of plastic contained in the packaging of our own brand products by 20% by the end of 2025.

We are creating ways of working that prevent the contamination of water bodies and other natural areas with plastic.

We will guide our customers in the responsible use and recycling of plastic.

(Read more: [kesko.fi/en/plasticspolicy](https://kesko.fi/en/plasticspolicy))



# 1. Promoting sustainability with our plastics policy

## ACHIEVING OUR TARGETS GRADUALLY AND RESPONSIBLY

With its plastics policy, Kesko is preparing for changes in its operating environment and promoting the main goal of sustainability – after all, sustainable use of plastic is also intrinsically linked to the reduction of food waste. The policy does not mean that everything will change immediately, however. We will progress towards our 2025 targets gradually and responsibly; changes will be applied in a way that does not cause unnecessary costs or wastage.

- We will favour packaging design that supports the plastics policy when purchasing new products.
- We will transition to better choices when products are updated or changed (new label/package size etc.).
- We will advance the principles of the plastics policy at other suitable occasions, such as when product batches run out or when switching to a new manufacturer.

The objective of the plastics policy is to increase recyclability and gradually reduce the amount of plastic. For instance, favouring refill pack solutions helps reduce waste and the carbon footprint.

## Good examples of plastic reduction:



The fibre-based EcoFishBox replaces expanded polystyrene (styrofoam) packaging for fish.



Domestic, fully compostable Menu product range's Eco cups, plates and dispenser paper napkins are a responsible choice for events and takeaway sales. Unbleached, soft dispenser paper napkins are manufactured from FSC certified, compostable fibres.



Plastic-free cucumbers are well suited for the HoReCa industry where the shelf life cycle is short.

# 1. Promoting sustainability with our plastics policy

## *What does the plastics policy mean in practice?*

**Cooperation between Kesko, goods suppliers and packaging manufacturers is crucial for reducing the amount of plastic and increasing recyclability. You can use this checklist to support Kesko's plastics policy.**

- Avoid plastic packaging that contains aluminium and other metals. Ask the manufacturer whether the tops, lids, tear-off lids, caps and seals can be manufactured from the same type of plastic as the rest of the package.
- Avoid plastic alloys and unnecessary multilayer packaging where an individual plastic film contains different types of plastic or, for example, both plastic and aluminium.
- Ask the manufacturer whether multilayer packaging can be replaced by a transparent mono-material that is much easier to recycle.

- Avoid dark or black plastic. Carbon black plastic packaging cannot be sorted with current technology. Dark coloured plastic, meanwhile, results in grey recycled plastic with limited uses.
- Choose packaging with an easily detachable label and water-soluble print/glue (except when the packaging must withstand moisture).
- When purchasing biodegradable plastic bags, choose fully compostable bio bags that comply with the EN 13432 certificate.

- Don't purchase products packaged in polyvinyl chloride (PVC). PVC is practically non-recyclable.
- Don't purchase oxo/d2w-biodegradable plastic bags.



### **EU'S SUP\* DIRECTIVE IN A NUTSHELL**

EU's directive (2019/904) is going to restrict and ban the use of certain single-use plastics in the future. The goal of the SUP directive is to curb the harmful impacts of plastic products on the environment, particularly seas and marine environments. It is a step towards moving into circular economy with the promotion of innovative and multifunctional materials.

The ban will apply to plastic cutlery, plates, straws and cotton buds whereas restrictions focus on i.a. plastic cups and food containers. The directive is to be implemented in national legislation by the summer of 2021. More details on the bans and restrictions will be available once the legislation is completed.

\*SUP (Single-Use Plastics)

# 2. Plastic packaging

Packaging protects products from damage, oxygen, bacteria, drying and moisture. Packaging foods in a protective gas can extend their selling periods considerably without any preservatives – wastage in unpackaged foods is significantly larger than that of properly packaged ones.

In other words, we can't give up plastic packaging altogether, but we can develop them. Pressure from customers prompts Kespro and the whole supplier chain to take recyclability into consideration in packaging design.

Recyclability is dependent on not only the type of plastic but also the other materials and substances the packaging contains.

## Plastics policy in K Group: avoid-reduce-recycle

Target -20% by 2025

Can plastic be replaced with another material in packaging without compromising product safety and preservability?

Target -20% by 2025

No

- Make packaging conform to the plastics policy by 2025*
- Recyclable, reusable or compostable
  - No black plastic – transparent is always best
  - Avoid multilayer materials and metallised films
  - Avoid unnecessary additional substances in plastic

Yes

- Change the material if...*
- There are no significant additional costs
  - The product packaging will be changed otherwise
  - However, remember to use all the old packaging first

*Minimise* the amount of packaging material, but without compromising product safety or preservability.

It is better if you opt for *only one type of plastic*. Also check the material used in labels, lids, caps etc.

Favour packaging in which the print is on a detachable label or wrapper.

Check and, if necessary, change the materials and quantities of transport packaging.



# 2. Plastic packaging

## COLOUR AND COMPOSITION OF PACKAGING

Recycled raw material made from transparent packaging has the widest range of different uses. It can be utilised in various product applications. There is more demand on the market for transparent plastics, which means their price is also better.

Colours, including printed colours, make recycled material grey. If a transparent package cannot be used, you can use water-soluble print, easily detachable labels or cardboard/plastic tubes instead of dyed plastic. Carbon black plastic packaging cannot be sorted with current NIR (near infrared) technology. Dark grey dyeing can also cause problems.

For better recycling, it is always recommended that you choose a mono-material whenever possible. Multilayer materials and films made up of different types of plastic

cannot be recycled as well as packaging manufactured from a single type of plastic. Aluminium and metallisation weaken the quality of recycled plastic significantly, so their use should be avoided. Similarly, combination packaging cannot be recycled. Packaging containing plastic and, for instance, paper or cardboard can only be recycled if the consumer separates the different parts from one another before placing them in the collection containers.

Additional substances can be used to adjust the different properties of plastics, such as their processability, rigidity, protective features (e.g. water, oxygen and fat resistance) or colour. Additional substances may impact the recyclability of material, for example, by making it harder to identify or weakening the properties of the material it is recycled into.



**The best package is preferably transparent and manufactured from a single type of plastic without unnecessary additives.**

## *Taking one step at a time towards our targets*

### In 2025:

- The packaging of our own brand products will contain 20% less plastic.
- All packaging of our own brand products will be recyclable, reusable, biodegradable, bio-based or made from renewable raw materials.
- The packaging of our own brand products will be labelled with sorting instructions in plain language.



# 2. Plastic packaging



## LABELLING

The label must not make the packaging more difficult to sort, wash or recycle. The best label is made of the same material as the rest of the packaging, and it comes off when the packaging is washed. This eliminates the possibility of errors in NIR identification. If the label covers more than 60% of the packaging's surface and is made of a different type of plastic or from paper, the NIR equipment may identify the packaging incorrectly and sort it into the wrong type of plastic.

In good packaging, the label and other print are placed only on the lid made of plastic film. The bottom of the packaging, for example the tray, is usually made of mono-material well-suited for recycling, whereas the plastic lid is often made of mixed plastic film.

**The best label is made of the same material as the packaging and is removed when the packaging is washed. The label covers less than 60% of the package's surface and is placed on the lid made of plastic film.**



## PACKAGE SEALING

Glue is used for sealing packaging and attaching labels and other components. For the purpose of recycling, it is important to use as little glue as possible and to make sure that it dissolves in a normal washing process without leaving any residue.

The best recyclability can be achieved when the lids, tops, caps and seals are all made of the same material as the rest of the packaging. An NIR device detects the type of plastic used in packaging, so if the cap is of a different type, the NIR device will sort the entire package into the wrong type of plastic. Plastic tear-off lids are easier to remove than seamed lids.

**In the best cases, labels are attached to the packaging with water-soluble glue. The tops, lids, caps and seals are all made of the same material as the rest of the packaging.**



## PACKAGE MARKINGS AND WRAPPERS

Printed colours weaken the quality of recycled plastic, causing it to become coloured. Laser marking is a good printing method for production dates and best before dates, among other details. A water-soluble colour is generally better than a solvent-based colour, except of course in packaging that must withstand humidity (e.g. cold and frozen products). The product information and information concerning the brand should be printed on a removable label or on a plastic or cardboard wrapper placed around the packaging.

**The best printing is made using laser and a water-soluble colour. The product information is printed on a separate label or wrapper.**

# 3. Plastic has many uses

The aim of the plastics policy is a controlled reduction in the use of plastic. After all, plastic is still an excellent packaging material that protects products effectively, reducing wastage. Thanks to its light weight, plastic reduces the environmental load caused by logistics. Plastic is also a good material in many home and speciality goods that need to be durable and have a long life.

## USES AND RECYCLABILITY OF PLASTICS

There are already more than 500,000 different materials and brands classified as plastics on the market. The most common plastic polymer types are low-density polyethylene (LDPE), which is used in plastic wrap and plastic bags; high-density polyethylene (HDPE), which is used in juice bottles and jerrycans; polypropylene (PP), which is used to make the thin, rustling plastic packaging for biscuits and sweets; polyethylene terephthalate (PET), which is used to manufacture plastic bottles and fleece textiles; and polystyrene (PS), which is used in such applications as disposable cups and, in foamed form, when it is called expanded polystyrene (EPS), to make thermal packaging.

## SUITABILITY OF DIFFERENT PLASTIC TYPES FOR SORTING AND TREATMENT AT RECYCLING FACILITIES AND THE MARKET FOR RECYCLED PLASTIC IN CONSUMER PACKAGING

Plastics that get three OKs work well throughout the recycling process.

Source: Finnish Plastics Recycling Ltd, May 2018. The situation may change depending on the market.

	Sorting	Further processing	Markets
LDPE film (incl. green PE)	Ok	Ok	Ok
HDPE	Ok	Ok	Ok
PP hard packaging	Ok	Ok	Ok
PP film	Ok	(Ok) <sup>1</sup>	-
A-PET	Ok	Ok	Ok
C-PET and PET-G	(Ok)	-	-
PS	Ok	(Ok) <sup>2</sup>	- <sup>3</sup>
EPS <sup>4</sup>	-	-	-
PVC and PVDC	Ok	-	-
PLA and other biodegradables	-	-	-
Oxo-biodegradables	-	-	-

1) PP film made from recycled plastic is not transparent

2) PS is sorted with "mixed plastics", which vary in their recyclability

3) Few applications, limited market

4) EPS (expanded polystyrene, or styrofoam) consumer packaging; industrial packaging has separate recycling systems

## LOW-DENSITY POLYETHYLENE FILM (LDPE)

Most flexible packaging is made of low-density polyethylene (LDPE). For example, plastic bags and the various types of shrink wrap and stretch wrap used to protect loaded pallets are made of LDPE or LLDPE. LDPE film can be sorted with NIR equipment in the 2D material flow at plastic recycling facilities, and there is a good market for it.

- Some of the applications for recycled LDPE include plastic bags, bin liners and industrial plastic film.

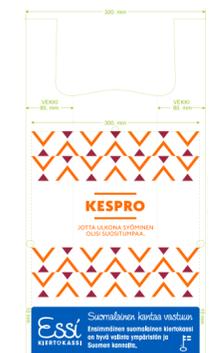
### Brand



### Use



### Application



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# 3. Plastic has many uses

## HIGH-DENSITY POLYETHYLENE (HDPE)

High-density polyethylene (HDPE) is used in various types of plastic packaging, mostly shampoo bottles, jerrycans and other blow-moulded containers. It is fairly easy to sort HDPE automatically, although some materials on the packaging labels may interfere with its identification.

- HDPE can be easily recycled with an appropriate thermal process. Its applications include plastic profiles, tubes and blow-moulded non-food packaging.

## POLYPROPYLENE PACKAGING (PP)

PP packaging with print or combined with a PP label is the easiest plastic packaging to recycle, as long as it does not contain any additional substances. PP packaging includes yoghurt pots, margarine tubs and packaging for cold cuts, cheese and convenience foods.

- There are plenty of applications for recycled PP in the injection moulding industry, where it is refined into numerous plastic products.

## POLYPROPYLENE FILM (PP)

PP is preferred in certain types of product packaging because it can be used to manufacture somewhat clearer wrap than from LDPE. Oriented PP film is extremely tough and can be used to replace PA film in multilayer structures.

- Packaging made from PP film almost always has printing on it, which means recycled PP film is not clear but grey. As PP film does not have much demand as recycled plastic yet, efforts are underway to make recycling more efficient.

Brand



Use



Application



Brand



Use



Application



Brand



Use



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# 3. Plastic has many uses

## PPOLYETHYLENE TEREPHTHALATES (A-PET, C-PET AND PET-G)

The majority of PET in Finland is recycled through the closed system of deposit bottles. A-PET, or so-called bottle PET, is the most widely recycled plastic in the world. A-PET collected through the deposit bottle system is often used to make new food-grade bottles.

- Sufficiently clean sorted A-PET can be used for new packaging and, for example, film products, but problems may arise if it is mixed with other PET types. Lower-quality A-PET is used to make polyester fibres, among other things.

## POLYSTYRENE AND EXPANDED POLYSTYRENE (PS AND EPS)

PS (polystyrene) and EPS (expanded polystyrene, or styrofoam) are used in containers and boxes as well as for insulation and cushioning.

- The sorting and washing of PS plastics separately is profitable only in very large facilities. The fact that it has a limited number of applications partly reduces the popularity of recycled polystyrene.

## POLYVINYL CHLORIDE (PVC)

Kespro does not approve the use of PVC. PVC is not recommended as a material in packaging altogether, but its popularity is based on its versatility and cheap price. PVC can be used to manufacture such products as hard tubes, flexible vinyl gloves and tarpaulins.

- It is practically impossible to recycle PVC packaging. It is not suitable for incineration, either, as PVC, when burned, produces a gas called hydrogen chloride that turns into hydrochloric acid when it comes into contact with water. Burning PVC without proper treatment of flue gases is extremely harmful.

Brand



Use



Application



Brand



Use



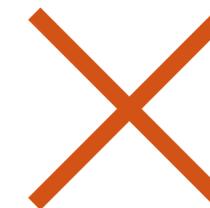
Application



Brand



Use



Application



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# 3. Plastic has many uses

## *Bio-based, biodegradable or compostable plastic - do you know the difference?*

### **BIO-BASED PLASTIC**

Bio-based plastics are processed from renewable organic raw materials, such as grains, sugar, starch or fat. They were developed to reduce our dependence on traditional plastics made from fossil-based raw material.

**Bio-based but not biodegradable plastic:** bio-PE and bio-PET, despite their organic source, bioethanol, do not decompose when composted. Their properties and uses are completely identical to those of their fossil-based equivalents, and they can be recycled in the same way as fossil-based PE and PET.

### **BIODEGRADABLE AND COMPOSTABLE PLASTIC**

Biodegradable and compostable are terms used to describe plastic that decomposes in certain conditions. These two terms are used nowadays misleadingly, to a certain extent, to create the impression of a packaging material that mystically disappears into thin air, an all-encompassing solution to waste. However, not all biodegradable plastics are compostable. The criteria for compostable products are stricter than those for biodegradable ones and they are decomposed in more controlled conditions, whereas the process of biodegradation can take place in varying conditions, ranging from cold oceans to warm lakes, forests, jungles and savannas.

**Biodegradable plastic:** The biodegradable designation is given to plastic manufactured from either fossil or renewable raw materials that undergoes a faster biodegradation process than ordinary plastic thanks to the addition of certain chemicals to it, for example. Biodegradable plastic goes through a biological anaerobic or aerobic degradation process that, depending on the conditions, produces carbon dioxide, water, methane, biomass and minerals.

**Compostable plastic:** In composting, microbes break down the plastic into compost through decomposition. For composting to take place suitable amounts of heat, water and oxygen as required, as well as microbes that break down the waste, turning organic material into compost. For plastic packaging to be considered industrially compostable, it must meet all the requirements of the European EN 13432 standard or the US ASTM D6400 standard. Both standards require packaging to decompose completely in a composting environment within a certain period of time without producing any harmful residue. However, the suitability of packaging for household composting must be checked separately, as the above-mentioned certificates do not guarantee this.

**Kesko recommends always choosing bio bags that fulfil the requirements of the EN 13432 certificate when purchasing compostable plastic bags.**



# 3. Plastic has many uses

## *From plastic waste to recycled plastic*

Plastic waste is not collected for the sheer joy of it – it is collected so that it can be recycled into new plastic. When recycled effectively, plastic may actually cause a lower overall environmental load than replacement materials. The process of plastics recycling includes all the necessary steps to create a recycled plastic product: the design, manufacture, purchasing and delivery to recycling of a plastic component or package and the logistics these entail, the pretreatment, sorting, cleaning and recycling of the plastic waste, and the delivery of recycled materials to manufacturing facilities, the design and manufacture of the recycled product and distribution.

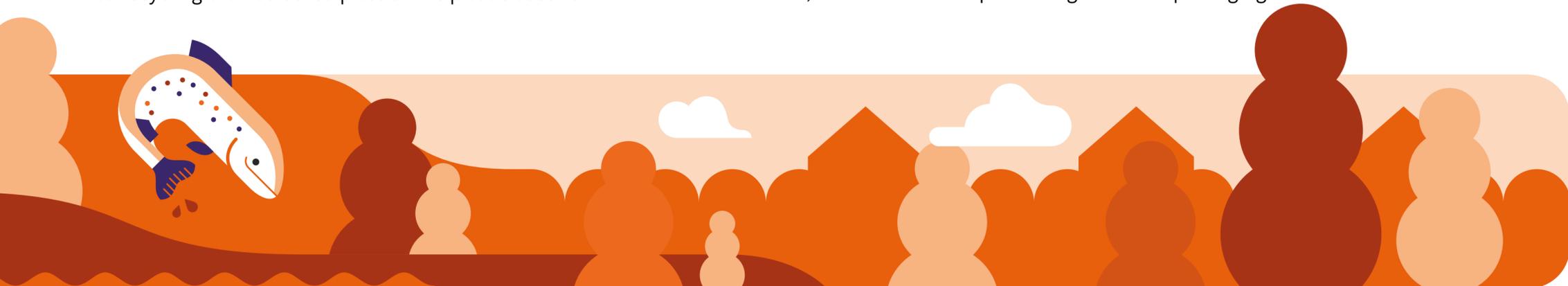
Recycled plastic is a raw material in the same way as virgin plastic, and it is subject to the law of supply and demand. There is more demand for high-quality recycled plastic than for the low-quality variety. Transparent plastic is more suited to recycling than coloured plastic. The plastic used for

transportation (stretch wrap) collected at stores and warehouses is excellently suited to recycling.

Finnish Plastics Recycling Ltd (Suomen Uusiomuovi Oy) maintains plastic packaging collection points for consumers and companies. In case of consumer packaging Rinki Oy is responsible for the operative management of the “Rinki-ekopiste” bring stations. Plastic collection from households will become easier in the future, as an increasing number of municipalities require housing companies to arrange a plastic collection container on properties with more than five households.

In Finland, recycled plastic is refined at Fortum’s plastics refinery located in Riihimäki, which treats separately collected consumer plastic packaging in Finland. In autumn 2019, L&T also launched its first plastics refinery in Merikarvia, which focuses on processing industrial packaging.

*Clear plastic  
recycles best!*



# 3. Plastic has many uses

## The plastic cycle - from waste to raw material!

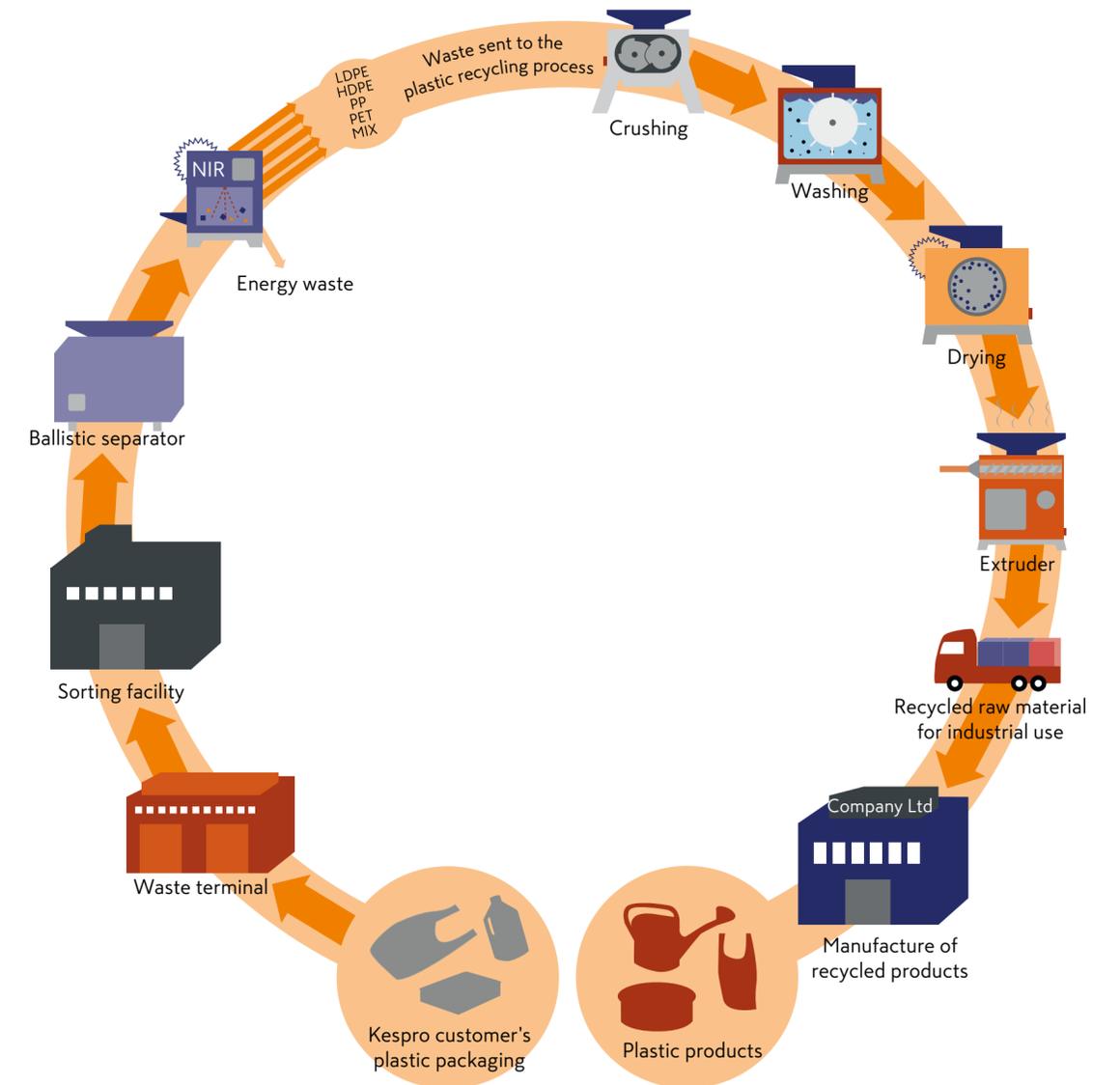
At the recycling facility, plastic packaging is sorted into preselected plastic types using various methods. These include cylindrical screening separation, ballistic separation, metal separation, water separation and, most importantly, NIR (near infrared) technology, which identifies packages on a conveyor belt using an infrared light beam and sorts them according to the type of plastic. All or several of these methods can be used in the same process.

NIR technology enables a fast sorting process. To use this method the packages must be separate from one another on the conveyor belt, instead of being inside each other. The NIR equipment directs several beams at different points of an object which allows it to identify the object's material.

The light beam cannot identify the type of plastic from a black surface (carbon black) or if a label covers more than 60% of a package's surface.

After sorting, the selected plastic types are baled for further processing. The selected plastic type is next transferred to a washing line, where impurities are cleaned. Once it has been dried, the plastic is granulated and packed. There are separate quality criteria for sold recycled plastic. The fulfilment of these criteria is monitored using standard quality control methods.

(Photo source: Finnish Plastics Recycling Ltd)



# 4. Plastic products

**In addition to plastic packaging, it is finally worth paying attention to products made of plastic that are purchased for our home and speciality goods selections and our building and home improvement selections.**

In many products, plastic is a superb material due to its durability and light weight, and it does not make sense to replace it with other materials. The proportion of recycled plastic, however, can be increased by favouring manufacturers specialising in its use. In building and home improvement, paint trays and the handles of paint rollers, for example, could easily be made of recycled plastic.

When purchasing, you should opt for recycled plastic in products whenever this is feasible, and to take stricter future regulations concerning single-use plastics into consideration.

It is recommended that you consider the recyclability of plastic products from the start by, for example, choosing products manufactured from a single type of plastic, which makes them easier to recycle. It is also worth checking whether the plastic used only partially in a product can be detached and recycled. Although plastic products are not yet recycled in the same way as plastic packaging, separate collection of such products will increase and become more widespread.

The amount of additives in plastic products may make them more difficult to recycle, leaving them with a short life cycle. Such plastic products will rather be used for energy recovery instead of recycling into new products.





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This guide has been prepared in cooperation with Finnish Plastics Recycling Ltd, VTT Technical Research Centre of Finland and Lassila & Tikanoja (L&T).

