



Netherlands Institute
for Sustainable Packaging

KIDV Glossary



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- Beverage carton



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- PP
- PS
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- PVdC
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- Silicone gel
- Silicones
- Single Use Plastic (SUP)
- Sink-float technique
- Sleeve (full-body sleeve)
- Washable or alkali-soluble adhesive (used for plastic packaging)



Paper / Cardboard

- Cellulose fibre
- Flotation
- Mineral oils. With additional clarification of MOSH & MOAH
- Paper and cardboard
- Pulp
- Pulping
- Waste paper (bin)
- WPK



Term:

Based on:

Barrier

A barrier can be formed by adding components to packaging material, such as a coating or laminate, or mixing them in with e.g. the pulp or granulate. This creates a barrier against exterior influences, such as moisture, UV radiation or oxygen. Materials can possess inherent barrier properties. Barrier properties are measured in units of permeability.

Zakboek Verpakkingen, p. 372.

Biobased packaging material

Biobased packaging material is a material whose raw materials have a direct or indirect natural origin, i.e. the material is made from renewable raw materials. Examples include paper and wood. Various types of plastics (e.g. bio-PET and bio-PE) are also made using biobased raw materials, such as the material that is made from the sugars from sugar cane and sugar beets. The term "Biobased packaging" is commonly used alongside the term "Renewable raw material." See also the term "Renewable raw material." Not all biobased materials are biodegradable.

[Biobased Packaging Catalogue, Wageningen University & Research, 2014.](#)

Biodegradable packaging material

Materials that can be broken down by microorganisms (bacteria or fungi) into water and natural gases, such as carbon dioxide (CO₂) and methane (CH₄). See also the term "Compostable packaging materials." Although many biodegradable materials are also biobased, that is not always the case.

Zakboek Verpakkingen, p. 114.

[KIDV - Fact sheet biodegradable plastic packaging](#)

For more information about biodegradable materials in the Dutch waste management system, you can consult our dossiers.

Branch Plan Sustainable Packaging

In accordance with agreements made as part of the Framework Agreement for Packaging 2013-2022, thirteen branches drew up a sustainability plan for packaging in the period between 2013 and 2018. This initial round of sector sustainability plans included concrete and measurable maximum attainable targets for making packaging more sustainable.

[KIDV - Branch Sustainability Plans](#)

To continue the process of making packaging more sustainable at the branch level, twenty-two branch organisations have drawn up a Branch Plan Sustainable Packaging 2019-2022 in collaboration with the Netherlands Institute for Sustainable Packaging.

Circular economy

A circular economy describes an economic system that is based on business models which replace the "end-of-life" concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations (Kirchherr et al., 2017).

Kirchherr et al., 2017

[Closing the loop - An EU action plan for the circular economy \(only available in Dutch\)](#)

[Measuring sustainability Plastic Recyclers Europe](#)

Circular Economy Package (CEP)

On 2 December 2015, the European Commission published "Closing the loop," the EU's action plan for the circular economy. It is also known as the Circular Economy Package (CEP). The action plan outlines targets and measures designed to stimulate the transition towards a circular economy, with the goal of preventing the depletion of natural resources and reducing humanity's environmental impact.

[Beleid en wet- en regelgeving verpakkingen \(only available in Dutch\)](#)



Term:

Based on:

Circularity

Circularity describes a restorative system in which we eliminate waste and pollution, preserve the products and materials we produce as long as possible in an efficient system, maximise their applicability and ensure they can be recovered after their usage phase for reuse, thereby reducing our reliance on virgin raw materials

[Ellen MacArthur Foundation](#)

[Measuring sustainability](#)

Coating

A coating is a thin layer of material that is applied to a base material. The coating adds properties that the base material itself lacks.

Zakboek Verpakkingen, p. 309.

Zakboek Verpakkingen, p. 430.

Glass specific

An addition to the surface of the glass after shaping the packaging. A coating may be added to improve the strength of the glass (cold-end coating and hot-end coating) or to change its appearance (e.g. to change the translucency of the glass or add a colour).

Colourant

An addition to a material to give it the desired colour. It can be added to the material before, during or after the production of the packaging.

Zakboek Verpakkingen, p. 360, 761-765.

Compostable packaging material

Compostable packaging materials are materials that meet the requirements of the European EN-13432 standard. This standard is based on a decomposition process for compostable plastics of no more than twelve weeks at a temperature of circa 60 degrees. However, Dutch composting plants use a shorter composting process. For example, WUR's Food and Biobased Research indicates that the composting processes in plants take circa three weeks, while the Dutch Waste Management Association specifies a period of two to four weeks. See also the term "Biodegradable materials."

Zakboek Verpakkingen, p. 396.

[Food and Biobased Research WUR, Bio-based and biodegradable plastics, Facts and Figures, April 2017, p. 42](#)

[Dutch Waste Management Association, PDF Bioplastics: welke wel/niet?, 22 March 2018 \(only available in Dutch\)](#)

For more information about biodegradable materials in the Dutch waste management system, you can consult the fact sheet: <https://www.kidv.nl/8070>

[Biodegradable packaging](#)

Diftar

Waste charges that are based on a fixed base rate plus a variable rate depending on the amount of residual waste produced. Diftar is designed as an incentive for separating residual waste.

[Eureco and WUR; Samenstelling ingezameld kunststof/PMD verpakkingen – het effect van inzamelsystemen \(only available in Dutch\)](#)

Disposal logo - Disposal Guide

Logos on the packaging can be used to indicate the categories of waste that the various components of a packaging belong to. Consumers can see at a glance how to dispose of each component. To stimulate the proper disposal of used packaging, companies can add communication on their packaging. One of the available options is the Disposal Guide. It is a collection of logos that are used to inform consumers about how to properly dispose of a packaging after use. For more information, visit www.weggooiwijzer.nl and consult the fact sheet "Symbols on packaging."

[KIDV Disposal Guide](#)

[KIDV - Fact sheet "Symbols on packaging" \(only available in Dutch\)](#)

Disruptor

A substance that disrupts the sorting and recycling process and/or the quality of recycled material. These are substances that have a negative impact on more than just their own packaging. Think of e.g. contamination with silicones, which can lead to the rejection of an entire batch of sorted plastic.

[Report CE Delft: Hoogwaardige recycling \(only available in Dutch\)](#)



Term:

Based on:

DKR standard

Plastic packaging waste is sorted according to the DKR standards. These standards differ per type of plastic. One or more product specifications have been drawn up for each type of plastic. The material is described, the minimum purity of the material is shown, the maximum contamination is determined and the delivery method is specified.

[Kreislaufwirtschaft und Rohstoffe mbH \(DKR\)](#)

[KIDV - Fact sheet Sorting plastic packaging waste \(only available in Dutch\)](#)

Eddy current

Eddy currents are electrical currents that are used to remove non-ferrous metals (e.g. aluminium) from a mixed stream of waste materials. Non-ferrous metals only became magnetic when an electrical eddy current is generated in the material. This technique is used as a sorting technique. The non-ferrous metals are picked up by the eddy current and end up on a different sorting belt. The machine used to perform this sorting step is also known as an Eddy-Current.

The Wiley Encyclopedia of Packaging Technology, p. 1076

Essential requirements

Requirements that packaging has to meet, as defined in article 11 and appendix II of the Packaging Directive.

Zakboek Verpakkingen, p. 145.

Extrusion

Extrusion is a production technique whereby a malleable material is heated up and pressed through a mould. The technique is commonly used in the production of plastic granulate and packaging.

Zakboek Verpakkingen, p. 377.

Filler

A filler is a type of additive that is added to a material during the production process to improve its properties or lower the cost of the final product. It is not a definable layer. Examples include the addition of fibres, mica, metal flakes (to create a metal look) and iron oxide (terracotta).

Zakboek Verpakkingen, p. 360.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Flexible packaging

Flexible plastics are characterised by their application, they are not rigid and can change shape to a certain degree. Flexible plastics are used for a wide range of applications: from the stabilisation of loads to high-grade films for packaging both fresh products and products with a long shelf life.

Zakboek Verpakkingen, p. 363.

Framework Agreement 2013-2022

The Framework Agreement for Packaging 2013-2022 gives substance to the efforts of municipalities, packaging businesses and the Government, each inspired by their own responsibility. With regard to packaging, the goal of the policy is to reduce their environmental impact through waste prevention and recycling.

[KIDV - Framework Agreement for Packaging 2013-2022 \(only available in Dutch\)](#)



Term:

Based on:

Good recyclability (definition used by KIDV)

Packaging must meet four conditions to be recyclable:

1. The packaging must be made from a plastic that is collected, has market value and/or is backed by a legally mandated programme.
2. The packaging must be sorted and bundled into pre-defined streams for recycling processes.
3. The packaging can be processed and recovered/recycled using commercial recycling processes.
4. The recycled plastic is used as a raw material for the production of new products.

[Plastics Recyclers Europe 2018](#)

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

For an innovative material, it must be demonstrated that a sufficient volume of the material can be collected and sorted, that the material is compatible with existing industrial recycling processes or that a sufficient volume is available for the implementation of new industrial recycling processes.

Household packaging waste

Household waste material: waste material from private households, except for collected components of these waste materials that are classified as hazardous waste material;

[Environmental Management Act \(only available in Dutch\)](#)

Hydrophobe

A material property which indicates that material is water-resistant and insoluble in water.

[Hydrofiel en hydrofoob](#)

Industrial waste

Industrial waste material: waste material that does not fall into the categories of household waste material or hazardous waste material;

[Environmental Management Act \(only available in Dutch\)](#)

Integral packaging

The complete packaging, i.e. including all labels, closures, etcetera. Examples include: a water bottle with a cap and label, an aluminium tray with a seal for a ready-made oven meal and a cardboard box for frozen vegetables.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Lacquer

A lacquer is a thin layer of material that is applied to a base material. The most common method uses lacquer rollers in a lacquering machine.

Zakboek Verpakkingen, p. 276.

Laminate

Laminates are materials that consist of multiple layers, applied in flexible packaging. The laminates consist of various layers made of various flexible materials. Laminates can be made from different base materials, e.g. PE, PET, paper or aluminium, or the same base materials, e.g. CPP and OPP. These layers are produced separately and then combined - either immediately or at a later stage - through e.g. lamination or coextrusion. In addition to these two techniques, other techniques are being developed with which to add extremely thin layers of alternative materials, e.g. vapour deposition, printing and coating.

Zakboek Verpakkingen, p. 409.



Term:

Based on:

Lamination

The layers are produced separately and then combined - either immediately or at a later stage - using a bonding agent. In addition to this technique, other techniques are being developed with which to add extremely thin layers of alternative materials, e.g. vapour deposition, printing and coating.

Zakboek Verpakkingen, p. 409.

Lansink's Ladder

Lansink, a former member of the Dutch Parliament, submitted a motion about the desired processing of waste in 1979. Lansink's Ladder shows what the most environmentally friendly methods of waste processing are in the form of a hierarchy. The higher it is placed on Lansink's Ladder, the more environmentally friendly a waste processing method is. Lansink's Ladder consists of the following "steps:"

Zakboek Verpakkingen, p. 704.

1. Waste prevention
2. Product reuse
3. Material reuse (recycling)
4. Incineration with energy recovery
5. Incineration
6. Disposal (banned for packaging in the Netherlands)

Laser coding

Laser coding is used to produce a permanent mark of high quality, without adding any material. The resulting code can be highly visible or inconspicuous, depending on the material.

Zakboek Verpakkingen, p. 506.

Life Cycle Analysis (LCA)

LCA is short for Life Cycle Analysis. It describes the entire life cycle of a product or activity, from the extraction of raw materials to production and the (re)use of materials up to and including waste processing. It is a tool to gain insight into the environmental impact of a product or service. Performing an LCA requires specialist knowledge and the use of standards to make the results of the LCA and the assumptions that are made interpretable.

Zakboek Verpakkingen, p. 129.

[Measuring sustainability](#)

Main component

In a packaging, one component is the largest/heaviest/thickest. This is seen as the main component of the integral packaging and it is often the component that contains the product. Examples include: a water bottle (main component) with cap and label (subcomponents), an aluminium tray (main component) with a seal (subcomponent) for a ready-made oven meal, and a cardboard box (main component) for frozen vegetables.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Mass balance

A mass balance describes all incoming and outgoing flows of a system or plant. The total incoming quantity should correspond to the total outgoing quantity. For packaging waste subject to chemical recycling, the recycled quantity for reporting on statutory recycling targets should be accounted for based on a mass balance method. This mass balance method must show, among other things, which part of the input to the chemical recycling process has been converted into mass of recycled plastic and which part of the input has been converted into energy. For chemical recycling, the same measuring point applies as for mechanical recycling.



Term:

Based on:

Mechanical recycling

A technique whereby plastic waste is turned into granulate via a mechanical process. This granulate can be reused for the production of new plastic products, thereby replacing virgin material.

[Plastic Recyclers Europe](#)

Metallised packaging material

Packaging material with a metal coating can consist of different base materials to which a layer of metal has been applied on one side. The material can feature a layer of metal - usually aluminium - that is added as a barrier or decorative layer using vapour deposition or a thermal transfer layer. The difference between vapour-deposited metal and an added layer lies in the thickness of the material.

Zakboek Verpakkingen, p. 435.

Miscanthus

Miscanthus is a plant, also known as silvergrass. In its raw form, this reed-like plant can be used as animal bedding or fuel for stoves, but after processing it can be used to make building materials, paper, bioplastics or biofuels.

[Elephant grass - Miscanthus](#)

Mono-layer

A single layer of material that by definition consists of a monomaterial.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Monomaterial

Monomaterials are made of one type of material.

Example

Monomaterial can be one layer of a particular polymer, or multiple layers of the same polymer (e.g. two outer layers of virgin plastic with an intermediate layer of recycled plastic of the same polymer). A monomaterial contains no layers of other materials. However, there may have been additions to the material, such as printing, coatings or additives.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Multi-layer

A multi-layer is a material that consists of multiple layers of material. These materials can be made from the same type of material (as in a monomaterial) or different types of material (as in a multimaterial).

Zakboek Verpakkingen, p. 369, 406 - 409.

Multimaterial

Multimaterial is a material that is made up of different types of material. These can be different layers of plastic, sometimes in combination with other types of material such as paper or aluminium.

Zakboek Verpakkingen, p. 369, 406 - 409.

Multi-use packaging - Reusable packaging

Any action whereby the packaging, which is designed to be reused a minimum number of times during its lifespan, is refilled or used for the same purpose that it was designed for, possibly involving the use of products available on the market with which the packaging can be refilled; such refilled packaging becomes packaging waste when it is no longer reused (source: 94/62/EG); in other words, the reuse of a packaging for the same purpose that it was originally produced for, e.g. by refilling it. Some examples of reusable packaging include (beer) bottles and pallets.

[Basisdocument Monitoring Verpakkingen \(2013 - 2022\) \(only available in Dutch\)](#)

Near-Infrared (NIR)

A part of the spectrum of light that is just barely invisible to the human eye. NIR scanners use Near Infrared light to distinguish between different materials. This technique is used to separate different types of plastic in a waste stream.

The Wiley Encyclopedia of Packaging Technology, p. 124

[Near-infrared spectroscopy \(Wikipedia\)](#)



Term:

Based on:

Opaque

Opaque packaging is conventional packaging that is made opaque through the addition of certain colourants. For example, an opaque white plastic milk bottle or a perfume bottle made of opal glass.

[KIDV - Fact sheet Opaque PET bottles and recycling, 2017.](#)

Packaging

All products, made from any type of material, that can be used to enclose, protect, transport, deliver and market goods, from raw materials to finished products, throughout the entire process from producer to user or consumer. The definition also includes disposable products used for this purpose. Packaging only includes:

- **sales or primary packaging**, i.e. packaging that was designed to form a sales unit for the end user or consumer at the point of sale;
- **outer or secondary packaging**, i.e. packaging that was designed to form a collection of multiple sales units at the point of sale, regardless of whether these are sold as such to end users or consumers or are only used to restock the shelves at the point of sale; this packaging can be removed from the product without affecting its characteristics;
- **transport or tertiary packaging**, i.e. packaging that was designed to make the process of loading, unloading and transporting a number of sales units or outer packaging easier and prevent physical damage to the packaged products. Rail, road, shipping and aircraft containers are not classified as transport packaging.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Packaging waste management contribution

Contribution to the costs of managing a waste material. Companies that produce or import more than 50,000 kg of packaging material on the Dutch market per calendar year exceed the threshold and must pay the packaging waste management contribution. If a company produces or imports fewer than 50,000 kg of packaging material per calendar year, it does not exceed the threshold and is not required to pay this contribution.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Printing

There are different types of printing, whereby colourants are used to add printing to a material. The printing technique that can be used depends on a packaging's material and intended purpose.

Zakboek Verpakkingen, p. 199, 277.

Producer or importer of packaged products

The party who brings substances, preparations or other packaged products to market;

- The party who professionally imports substances, preparations or other packaged products and disposes of the packaging;
- The party who professionally orders another party to add their name, logo or brand mark to the packaging of substances, preparations or other products;
- The party who brings a packaging to market that is designed to be added to substances, preparations or other products so they can be marketed to end users.

[Packaging Management Decree 2014 \(only available in Dutch\)](#)

Reactive polyurethane hotmelt

An adhesive compound based on polyurethane that is formed by the cooling of the substrate and then polymerises through interaction with water. This is a hotmelt adhesive that is not washable in either cold or warm water or in lye. Hotmelts are used for their extremely fast adhesion immediately after coagulation, which allows packaging to be processed in seconds.

Zakboek Verpakkingen, p. 452.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)



Term:

Based on:

Recyclability

A disposable unit of packaging must meet four conditions to have good recyclability:

1. The composition of the disposable unit must be such that it is collected or picked up by approved waste collectors.
2. The disposable unit must be sorted and/or bundled into pre-defined streams for recycling processes.
3. The material* must be processed in a recycling process on an industrial scale**, and raw materials must be recovered.
4. The recovered raw material must have a uniform composition and can be used to produce new packaging or products.

* At least 70% of the material of the disposable unit must be the target material for the recycling process.

** Industrial scale means that at least 50% of the collected packaging is sorted correctly and processed by at least two recyclers.

Recyclate

The result of a completed recycling process, which can be used without any further processing in a production process to create semi-finished or finished products. There are two recyclate streams:

Post-industrial recyclate comes from the recycling of industrial waste. This material has not been used yet. In other words, it has not been used as a packaging yet. Think of e.g. cutting waste or a rejected mould or print. Processing post-industrial recyclate (or outsourcing this) forms part of an efficient production process.

Post-consumer recyclate comes from used packaging. It has fulfilled its role as packaging, has been used and then disposed of in a common waste management system. 'Consumers' include both consumers at home and people who use the packaging elsewhere, such as in companies/factories, offices or, for example, holiday parks.

Ellen McArthur Foundation

Zakboek Verpakkingen, p. 679.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Recycling (in accordance with article 3.7 of the Guideline

Reprocessing waste materials in a production process for their original purpose or for other purposes, including organic recycling and excluding energy recovery.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Renewable raw material

Raw materials can be called renewable if they come from sources that can be naturally renewed on a human time scale (i.e. within the span of an average human lifetime), contrary to fossil oil that takes millions of years to form. Examples include materials made from wood fibres (paper and cardboard) and plastics made from the sugars from sugar cane or sugar beets. The term "renewable raw material" is commonly used alongside the term "biobased packaging material." See also the term "Biobased packaging material." Materials made from renewable raw materials are not necessarily biodegradable.

[Bio-based and biodegradable plastics – Facts and Figures, Wageningen Food & Biobased Research, 2017, p. 15.](#)

Ellabban, 2014

Rigid packaging

Contrary to a flexible packaging, a rigid packaging cannot be crumpled up easily and without using much force. Generally speaking, rigid packaging is more three-dimensional than two-dimensional. It retains its shape, even when the packaging is empty.

Zakboek Verpakkingen, p. 475.



Term:

Based on:

Separate waste collection (source separation)

The process of collecting waste whereby a waste stream is separated by type and nature of the waste to simplify the specific treatment of the different materials. The name "source separation" is derived from the fact that the initial separation occurs at the source, i.e. the consumer.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Subsequent separation

The process of separating a mixed waste stream after collection into optimally pure substreams using a sorting installation and/or handpicking.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Transition agenda

Following Europe's approach, the Netherlands has developed its own Circular Economy programme: Nederland Circulair in 2050 (see also the term "CEP"). This programme was published in September of 2016. To date, it has resulted in the signing of a Raw Materials Agreement, the development of various so-called Transition Agendas and the Implementation Programme Circular Economy 2019-2022. Transition agendas have been drawn up for five sectors/chains (January 2018). The transition agendas for Plastics and Consumer Goods also pertain to packaging. The transition agenda for Consumer Goods concerns both products with a short cycle, such as packaging and disposable materials, and products with a longer cycle, such as clothing and washing machines. The transition agenda for Plastics states that all plastic products must be circular in thirty-odd years. They have a small environmental footprint and are made from renewable plastics of a guaranteed quality.

[KIDV - European Laws & Regulations for packaging](#)

Transparent

Transparent packaging are packaging that are translucent (see-through). Materials can possess a greater or lesser degree of natural transparency. PP, for example, has a milky glow.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)

Virgin raw material

Primary raw material. The first time that the material in question is used. It can be either fossilbased or biobased.

[Basisdocument Monitoring Verpakkingen \(2013 – 2022\) \(only available in Dutch\)](#)



Term:

Based on:

Beverage carton

The Packaging Management Decree uses the following definition of a beverage carton: Packaging used for liquid food products that consists of at least 70% paper and cardboard; the remaining percentage consists of (a) different material(s).

[Packaging Management Decree 2014 \(only available in Dutch\)](#)

The Packaging Waste Fund expands on this definition with the following: The deciding factor in this definition is whether the contents are intended for human consumption. Contrary to what the definition suggests, beverage cartons do not necessarily contain a beverage. They may also contain liquid products that are used for cooking (soups, sauces, etcetera).

[Packaging Waste Fund](#)



Term:

Based on:

Cold-end coating

This coating is always applied during the production of glass packaging. It makes the glass smoother, thereby reducing the risk of damage. The packaging will slide alongside each other and alongside the rails of packaging lines more easily. After going through the cooling oven, an organic compound is added to the glass at a temperature of 100-200°C using a spray or vapour deposition. This can be done using many different substances. These substances can be divided into two main categories:

- **Water-soluble substances** (such as oleic acids). These will be effectively removed from the packaging after one or two rinsing cycles.
- **Non-water-soluble substances** (e.g. wax, paraffin and polythene). The downside of the latter is that e.g. the adhesive used to attach labels does not form as strong a bond.

Zakboek Verpakkingen, p. 310.

CPS

An abbreviation of ceramic, porcelain and stone. A collective term used for interferants in the glass recycling process.

[KIDV - Recycle Check for Glass Packaging](#)

Crystal glass

Glass that contains a high concentration of lead. It is used to make e.g. decanters, wine glasses or TV glass. The addition of Pb2O3 (lead oxide) lowers the melting point of the glass and increases its refractive index, shine and hardness (crystal).

Zakboek Verpakkingen, p. 293.

Flat glass

Flat glass - e.g. window panes, wired glass and insulation glass, car windows and mirrors - comes from greenhouses, buildings and cars, among other places. Flat glass comes from recycling schemes, municipal waste collection facilities, construction companies, greenhouses, glaziers and specialised collectors from the automotive sector.

[Maltha Glass Recycling](#)

Glass bath

The glass bath is the part of the oven where the glass is melted down.

Zakboek Verpakkingen, p. 297.

Heat-resistant glass

Heat-resistant glass (also known as safety glass), e.g. heat-resistant laboratory glass, oven trays, stoves, the glass used in the doors of washing machines and microwave ovens and glass pan lids. Made from borosilicate.

[Maltha Glass Recycling](#)

Hollow glass

Bottles, jars, bowls and glasses are examples of hollow glass, also known as packaging glass. Hollow glass generally comes from municipal waste collection, waste collection facilities, the food service sector and retailers.

[Maltha Glass Recycling](#)

Hot-end coating

This coating is always applied during the production of glass packaging (shortly after the packaging comes out of the mould, when it is still hot) and reduces the loss of strength that may occur during the production process. Tin or titanium oxide is added to the glass using vapour deposition at a temperature of circa 700°C, before the glass goes into the cooling oven. The tin or titanium oxide forms an unbreakable chemical bond with the glass. This bond is formed in areas with high surface tension, where microscopic damages have occurred.

Zakboek Verpakkingen, p. 309.

Multi-coloured glass

A mixture of coloured glass shards.

[KIDV - Recycle Check for Glass Packaging](#)



Term:

Based on:

Opaque/opal glass

White, non-translucent glass. It is made by adding fluorine to the glass.

[KIDV - Recycle Check for Glass Packaging](#)

White glass

Transparent, uncoloured glass. It is also known as flint or clear glass.

[KIDV - Recycle Check for Glass Packaging](#)



Term:

Based on:

ABS

See definition [PS](#).

Additives (plastic production)

Additives can be added to plastics to optimise the properties of the material. This may concern the production, the processing or the properties of the plastic itself. Examples of additives include anti-block, anti-condensation or antifog, antioxidant, colourants and fillers (see also the definition of "Filler").

Zakboek Verpakkingen,
p. 359, 360.

APET

See definition [PET](#).

Bio-PE

Polyethylene that is made from renewable raw materials, as opposed to PE that is made from fossil raw materials (such as oil). Bio-PE has the same chemical composition as fossilbased PE and can be processed, sorted and recycled using the same techniques. Bio-PE is not biodegradable.

[Biobased Packaging Catalogue, Wageningen University & Research, 2014.](#)

Bio-PET

Polyethylene terephthalate that is made from renewable raw materials, as opposed to PET that is made from fossil raw materials (such as oil). Bio-PET has the same chemical composition as fossilbased PET and can be processed, sorted and recycled using the same techniques. Bio-PET is not biodegradable.

[Biobased Packaging Catalogue, Wageningen University & Research, 2014.](#)

Bisphenol A (BPA)

Bisphenol A (BPA) is a chemical compound that can be found in plastic products, such as building materials, electronics, plastic bottles and toys. It is also used in packaging materials such as bottles made from rigid plastic and on the inside of cans. More and more materials are produced to be free of BPA in light of the growing insight into the harmful effects of BPA on people's health. For more information, you can consult the fact sheet: <https://www.kidv.nl/7910>

[KIDV - Fact sheet Bisphenol A](#)

BOPP

See definition [PP](#).

Carbon black

A commonly used black colourant for plastics. Carbon black absorbs NIR radiation. See also the term "Near Infrared (NIR)." Plastics coloured with Carbon black therefore cannot be identified by the NIR scanners in a sorting facility.

[European PET Bottle Platform](#)

[The Wiley Encyclopedia of Packaging Technology, p. 311.](#)

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Cellophane

Cellophane film is highly transparent and relatively rigid. It has been available for years, albeit in small quantities. Cellophane can be produced in a range of bright colours and it is therefore commonly used for candy wrappers. The material is also used as e.g. a glossy packaging for boxes of tea and (in the horticultural sector) as a deluxe packaging for flowers. The material is extremely resistant to heat and is also used in the production of laminates.

[Biobased Packaging Catalogue, Wageningen University & Research, 2014.](#)



Term:

Based on:

Chemical recycling

Chemical recycling involves using a chemical process to break down plastic into the material's original building blocks, so these can be used once more to produce plastic. There are different forms of chemical recycling: Solvolysis, Depolymerisation, Pyrolysis and Gasification. More information can be found in the report: Chemical recycling of plastic packaging: analysis and opportunities for upscaling. (<https://www.kidv.nl/8199>)

[KIDV - Report: Chemical recycling of plastic packaging](#)

Coextrusion

A process during which multiple layers of material are simultaneously produced and combined into a material during the extrusion process. Coextrusion can be used to produce monomaterials or multimaterials. Coextrusion should not be confused with lamination. A coextrusion product can be used in a laminate.

Zakboek Verpakkingen, p. 369.

CPET

See definition [PET](#).

EPP

See definition [PP](#).

EPS

See definition [PS](#).

EVOH

Ethylene vinyl alcohol, a polymer that is used as an oxygen barrier layer between other types of plastic.

Zakboek Verpakkingen, p. 342.

Flakes

In the context of plastic recycling, this term is used to refer to pieces of shredded plastic.

[Plastic Recyclers Europe](#)

Fossilbased

Raw materials or packaging materials can be called fossilbased if they are made from fossil oils. Fossil oils are classified as a finite raw material.

[Bio-based and biodegradable plastics – Facts and Figures, Wageningen Food & Biobased Research](#)

HDPE

See definition [PE](#).

HIPS

See definition [PS](#).

In-Mould Label (IML)

A label that is applied in the mould and becomes one with the packaging. Generally used during the injection moulding, blow moulding or thermoforming of packaging.

Zakboek Verpakkingen, p. 765.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

LDPE

See definition [PE](#).

LLDPE

See definition [PE](#).



Term:

Based on:

Mixed stream in plastic recycling

A sorted stream that consists of a mixture of plastic packaging, which sorting companies offer to recyclers for recycling. The mixed stream is used to produce such products as park benches, roadside posts, crates and pallets.

[Der Grüne Punkt](#)

Mono stream in plastic recycling

A sorted stream that consists of a single type of material, which sorting companies offer to recyclers for recycling. The stream has to meet certain sorting specifications.

[Verkenning 'Kunststof Verpakkingsafval als Grondstof' Technische en Economische Analyse \(only available in Dutch\)](#)

OPET

See definition [PET](#).

OPP

See definition [PP](#).

Oxo-degradable material

Oxo-degradable means that the plastic breaks down into minuscule pieces of plastic when exposed to soil, water and light. To realise this, special additives have been added to the plastic to allow it to break down into small pieces (micro-plastics). These additives can be added to all plastics.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

PE

Polyethylene, a plastic from the group of polyolefins that only consists of carbon and hydrogen. The most common variants are:

- **HDPE:** high-density PE, mostly used for rigid applications.
- **LDPE:** low-density PE, mostly used for films.
- **LLDPE:** linear low-density PE, mostly used for films.

Zakboek Verpakkingen, p. 335.

PET

Polyethylene terephthalate, a plastic from the polyester group. PET consists of carbon, hydrogen and oxygen. It is commonly used in rigid packaging (e.g. bottles, jars and trays), but also in films.

Zakboek Verpakkingen, p. 345.

PET-G

See definition [PET](#).

PLA

Poly Lactic Acid. PLA is a polymer made from lactic acid. Lactic acid is an intermediate product that is formed during the fermentation process of sugar or starch. These sugars come from e.g. corn or sugar beets, making them a renewable material (see the term "Renewable raw materials"). PLA is similar to BOPP and PET in terms of its transparency, it has high water resistance and provides an excellent gas barrier. PLA film makes a characteristic crinkling noise.

Zakboek Verpakkingen, p. 399.

PMD

The abbreviation of "Plastic Metaal Drinkkartons" (Plastic Metal Beverage cartons), one of the collection systems used in the Netherlands. Other commonly used names are: PBD (Plastic Blik Drinkkarton (Plastic Cans Beverage cartons)), PD (Plastic Drinkkarton (Plastic Beverage cartons)) or Plastic+.

[Samenstelling ingezameld kunststof/PMD verpakkingen – het effect van inzamelsystemen \(only available in Dutch\)](#)

Eureco and WUR report, 2017, p.3



Term:

Based on:

Polyolefins

A group of polymers that consist of single hydrocarbon compounds, such as polyethylene (PE) or polypropylene.

Zakboek Verpakkingen, p. 334.

PP

Polypropylene, a plastic from the group of polyolefins that only consists of carbon and hydrogen. The most common variants are:

- **PP:** mostly used for rigid applications such as bottles and caps.
- **OPP:** oriented PP, mostly used for films.
- **BOPP:** bbi-axially-oriented (stretched in two directions) PP, mainly used for films.
- **EPP:** Expanded PP, used as e.g. a buffer or insulation material.

Zakboek Verpakkingen, p. 337.

PS

Polystyrene is a material that is made from the styrene monomer. It is an exceptionally clear, brittle material that is ideally suited for thermoforming. The most common variants are:

- **High-impact polystyrene (HIPS),**
- **Acrylonitrile butadiene styrene (ABS)**
- **Expanded polystyrene, or Styrofoam,** or Styrofoam.

Zakboek Verpakkingen, p. 338.

EPS is used for many applications, e.g. as a buffer material and as an insulation material (e.g. fish packed in ice in EPS trays or human organs contained in liquid nitrogen in EPS transport packaging).

PVC

Polyvinyl chloride.

A polymer that consists of carbon, hydrogen and chloride.

Zakboek Verpakkingen, p. 339.

PVdC

Polyvinylidene chloride.

A polymer that consists of carbon, hydrogen and chloride.

Zakboek Verpakkingen, p. 340.

Shredding

The process of grinding or cutting plastic into smaller pieces of recyclable material.

[Plastic Recyclers Europe](#)

Silicone gel

A state which silicones or acrylates may attain when exposed to heat during the processing of recycle.

[KIDV - Recycle Check for Rigid Plastic Packaging](#)

Silicones

Polymer based on silicones. Used as e.g. a flexible seal in a packaging, e.g. the valve in the cap of a squeeze bottle.

Silicones are also used to apply flexible seals, e.g. in a bathroom with silicone paste.

[KIDV - Sealant cans in a circular economy, 2017](#)
(only available in Dutch)

Single Use Plastic (SUP)

Disposable plastics such as cutlery, cups, stirring sticks, cotton swabs, balloons, etcetera.

[KIDV - European Laws & Regulations for packaging](#)

Sink-float technique

A sorting technique that utilises the difference in density of materials and that of a fluid in order to separate these materials. Materials with a higher density than the fluid will sink, while those with a lower density will float.

[Recycling Platform](#)
(only available in Dutch)



Term:

Based on:

Sleeve (full-body sleeve)

Printed film that is applied around a rigid packaging via a process of stretching or shrinking. In the latter case, the film is exposed to heat, which causes it to shrink and conform to the shape of the rigid packaging. The sleeve is added to provide information and/or create a brand appearance, but it can also have functional properties.

Zakboek Verpakkingen, p. 765.

Washable or alkali-soluble adhesive (used for plastic packaging)

Adhesive that is washable in water or dissolves in an alkali bath. Labels attached with this type of adhesive can be removed with a washing process. A distinction is made between cold- and warm-washable adhesives. A soap, detergent or lye is usually added to the water to dissolve the adhesive.

[European PET Bottle Platform](#)

[KIDV - Recycle Check for Rigid Plastic Packaging](#)



Term:

Based on:

Cellulose fibre

Mechanically or chemically separated wood fibres that can be used to produce paper and cardboard.

Zakboek verpakkingen, p. 202.

[Grondstoffen: van vezel tot papier](#)

Flotation

Chemicals are used to create bubbles in the suspension (pulp). The ink particles stick to the rising bubbles and are brought to the surface. The ink particles can then be removed from the fibres. Other methods such as wash deinking and dispersion can also be used. The general term for the process of removing ink particles is "deinking." During this process, the fillers from the waste paper are also removed.

Recycling van papier en karton in Nederland in 2019 - KCPK

Mineral oils. With additional clarification of MOSH & MOAH

Various food products are packaged in paper and cardboard packaging, which are commonly made using recycled paper. This packaging may contain contaminants, such as mineral oils from newspaper ink. These are aromatic hydrocarbons (the so-called MOAHs) and saturated hydrocarbons (MOSH) from mineral oils. The European Food Safety Authority (EFSA) released a scientific recommendation in June of 2012. The conclusion was that mineral oils are a cause for concern, although their exact health effects are currently unclear.

[KIDV - Fact sheet mineral oils in packaging made from recycled paper and cardboard \(2016\).](#)

For more information, you can consult the fact sheet:
<https://www.kidv.nl/6568>

Paper and cardboard

"Paper and cardboard includes all cellulose-based fibre materials that are formed from a suspension into cohesive sheets, possibly with the addition of fillers and/or additives. Grammages up to circa 200-250 g/m² are called paper, while grammages over circa 200-250 g/m² are called cardboard."

[Pulp and Paper Industry - Definitions and Concepts CEPI](#)

Pulp

A suspension that mainly consists of water (99%) and cellulose fibres (1%). Pulp can be used to produce paper and cardboard.

Presentation KCPK Paper City October 2019 DDW

Pulping

Collected waste paper is sent to the pulper: a large bath filled with warm water (with a temperature between 15 and 65 degrees Celsius) and a rotor. The water penetrates the waste paper and breaks down the bonds between the individual fibres, possibly with the help of certain chemicals. The result is a suspension of water and fibres. This process is known as pulping or fiberising.

Recycling van papier en karton in Nederland in 2019 - KCPK

Waste paper (bin)

Collection method for used paper and cardboard paper and cardboard and products for household packaging waste. Paper and cardboard non-packaging is also collected as part of this stream. The collected material is offered for recycling. The Waste Separation Guide created by Papier Recycling Nederland (PRN) specifies what can and cannot be disposed of as waste paper.

[KIDV - Recycle Check for Paper and Cardboard Packaging](#)

WPK

An abbreviation that stands for Waste Paper & Cardboard; one of the collection systems for household waste in the Netherlands.

[Nedvang \(only available in Dutch\)](#)



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