

The SUEZ.circpack®

# DESIGN FOR RECYCLING GUIDELINES

for packaging



# Design for Recycling



**Packaging has multiple functions.** A very important role is to **protect & preserve** the product during the product's lifecycle. The packaging is also used to **communicate** with the consumer and **provide essential information**.

Having performed its primary functions, **packaging inevitably becomes waste**.

The highest impact of packaging's **ecological footprint** comes from its **production** and the **used materials**. As these used **resources are limited**, it becomes more and more **important** to give these materials a **circular life**.

**Sustainable plastic packaging will ultimately be circular: containing recycled raw materials for production AND being fully recyclable.** In order to achieve this, the wasted materials will have to follow a **recycling route** which ensures high quality reuse of the materials.

Enabling the recycling of packaging does not start at the end of its life, but right at the beginning. The design phase is the most essential moment to take recycling into account.

**These guidelines will assist you to ensure that the packaging you design can be recycled.**

As technologies are evolving, this guideline is a living document, and will be updated regularly.

**Let's give packaging a second life. Let's design for recycling!**

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# HOW WE CAN ASSIST

**SUEZ** is one of the world's biggest companies in the waste management sector. We have insights and hands-on experience in collection, sorting, reprocessing and recycling of packaging. On top of this we are also active in licensing & certification.

We love to share our knowledge to complete the circle, to give packaging a second life, to save our resources and to protect our planet.

**We are ready for the Resource Revolution!**



**Our Vision**

**SUEZ.circpack<sup>®</sup>** is an internationally active consulting service of SUEZ, specialized in circular packaging and recyclability. Our main services are:

- ❖ **Workshop & visit: DISCOVER** the world of recycling. Visit a sorting installation for household packaging and learn the essentials of recycling and design for recycling in a half day workshop.
- ❖ **Dedicated research:** make your question our challenge. From a basic operational sorting test up to dedicated lab-research or desk studies, all types of research are part of our **EXPLORE** service
- ❖ **Help in packaging design:** Let's **CO-CREATE** new packaging. With our combination of theoretical and operational knowledge we support you in the design of new packaging in order to ensure its recyclability.

## **CERTIFY: certification of recyclability**

On top of the services above, we offer **CERTIFY**. Based on a clear methodology, the recycling percentage of a packaging will be assessed and officially certified. This certification can serve as a mean to prove the recyclability of a packaging towards EPR systems and can be used in communication with consumers.

SUEZ.circpack<sup>®</sup> is proud to be an accredited certifying body of RecyClass for plastic based packaging. This partnership lead to co-development of the guidelines, test protocols, scoring mechanism and the certification protocol.

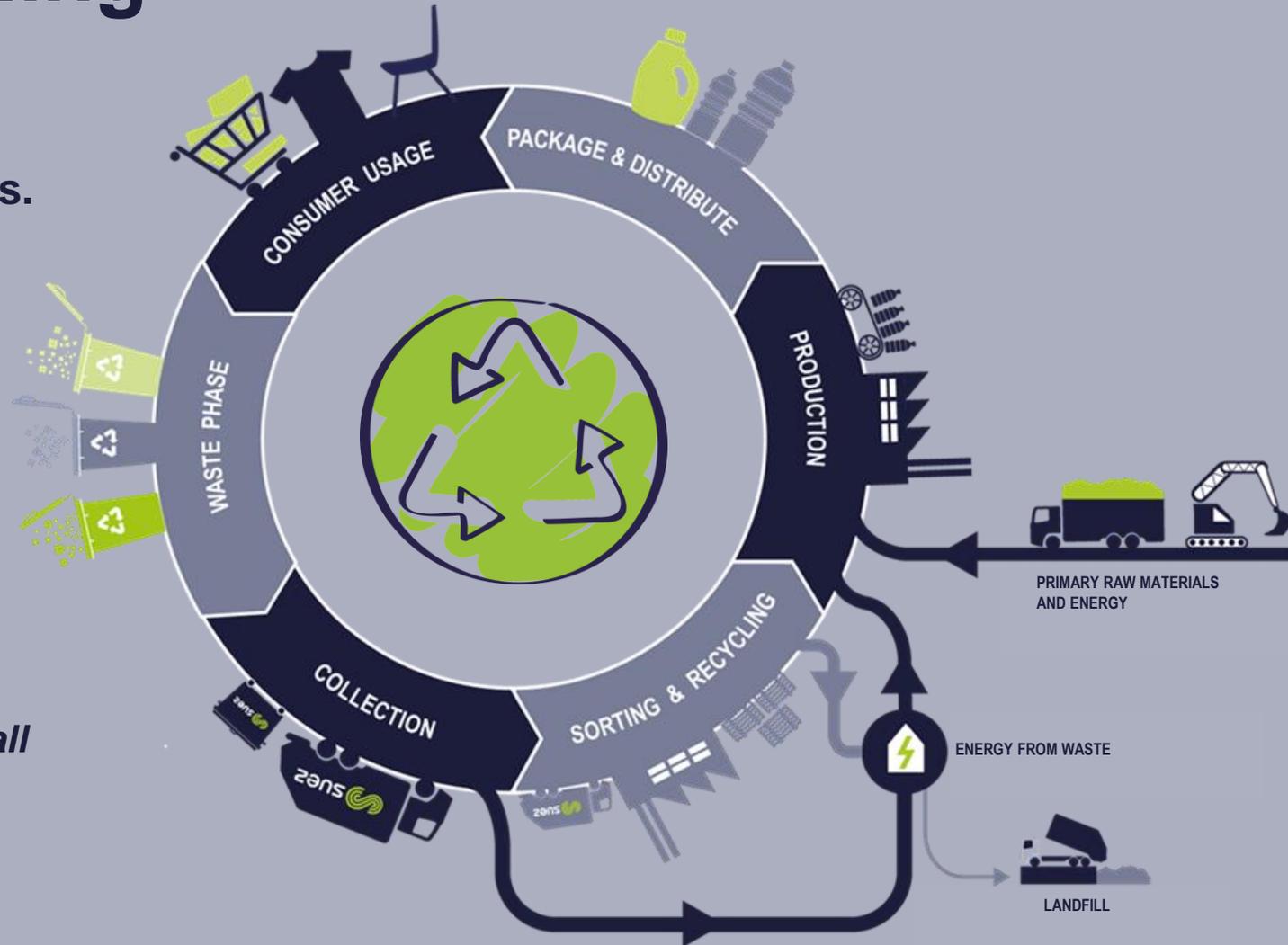
# Essential steps in recycling

We believe that recyclability only exists when it is part of our day-to-day operations.

So, before we consider a packaging to be 'recyclable', four ESSENTIAL STEPS IN RECYCLING have to be met:

1. Collection
2. Sorting
3. Reprocessing
4. Application

*Only if a packaging (or its materials) can follow all these steps, we consider it to be recyclable.*



Steps in recycling

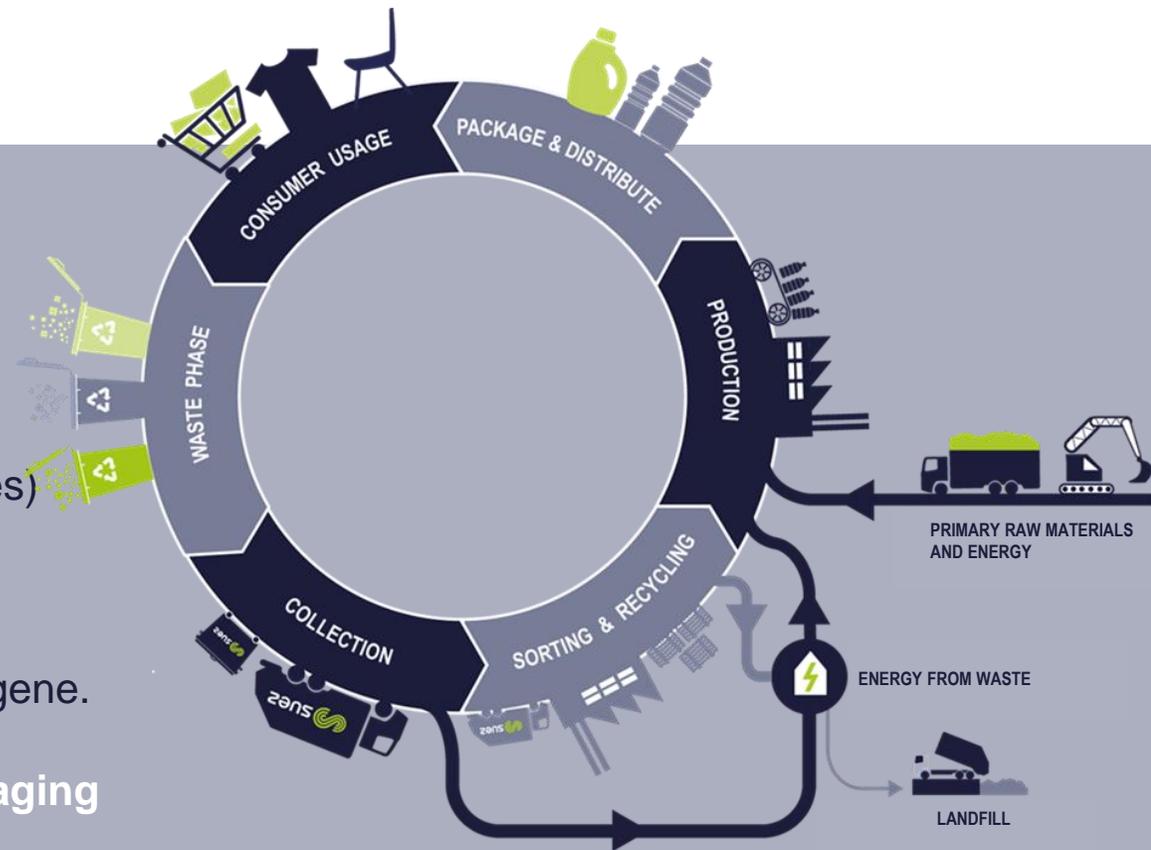
# COLLECTION

- In most Western- European countries, household packaging is collected separately from paper-, residual- and organic-waste.
- For the collection of special waste streams (soda bottles, batteries) local deposit systems can be in place. Consumers can return the used product or packaging for recycling.
- The collection of Business to Business waste is often less homogene.

**! Inform the consumer WHERE and HOW to dispose the packaging**

- The better the packaging can get emptied the better the recycling can be.

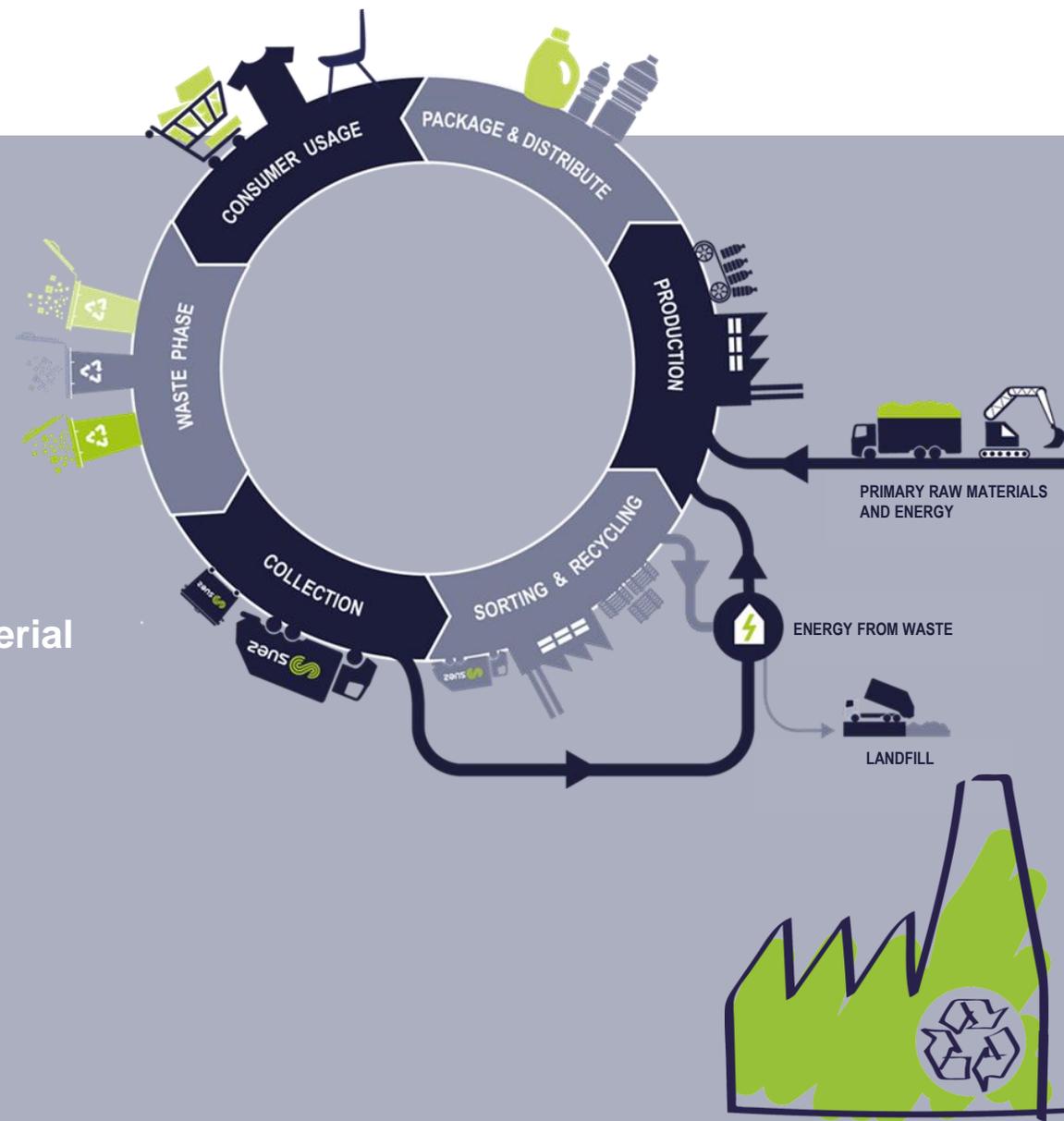
**! Optimise the shape of the packaging for easy emptying**



Steps in recycling

# 2 SORTING

- One of the first steps in the sorting process of **household packaging waste** is, to sort the material by size.  
! Small items (<2 cm) will not be recycled
- Infra-red scanners **detect** the used type of material.  
! Make sure that the scanners can identify the main used material
- The most **common materials** that are sorted, are *PP, PE, PET, Aluminium, Tin* and *Beverage cardboards*.  
! Please use the commonly sorted & recycled materials



Steps in recycling

# 3 RECYCLING

At the plastic recycler the material gets shredded and washed.  
**! Make sure that labels and glues can be washed off.**

The packaging will now pass through a sink-float-tank to separate types of plastics based on their different densities.

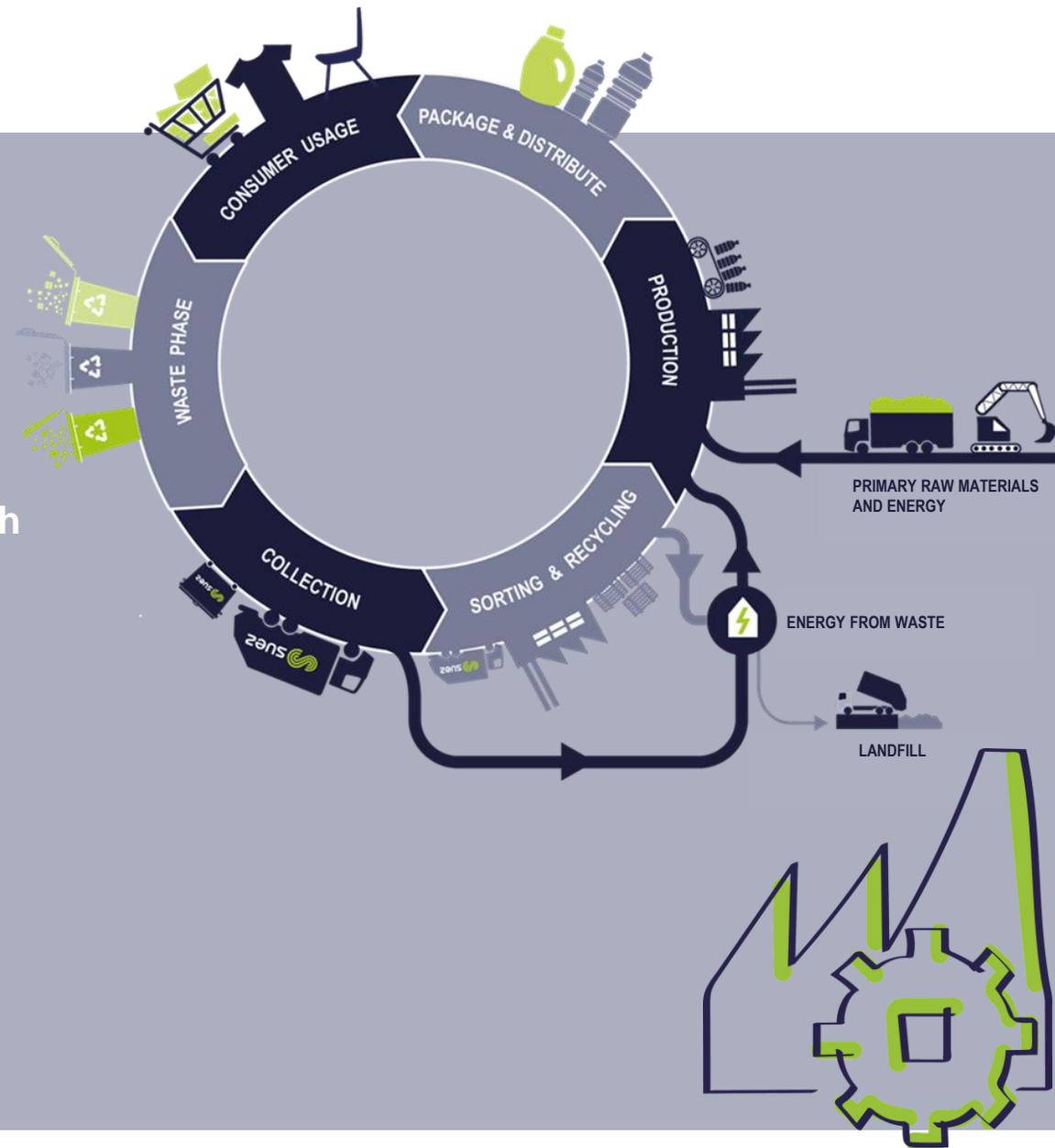
**! Make sure that you do not use different kind of materials with alike density to prevent contamination**

There are substances which are hazardous for the recycling because they contaminate the plastics and can obstruct recycling process (e.g. silicone)

**! Do not use material which will obstruct the reprocessing**

For the reusability of plastics it's important to limit colourisation.

**! Use transparent and light coloured plastics**



## Steps in recycling

# ADDITIONAL DESIGN QUESTIONS

## Which requirements does the packaging have to meet:

- ✓ Are all these requirements still essential?
- ✓ Can these requirements be rethought?

## Which different packaging can meet these requirements:

- ✓ Is it possible to replace a mixture of materials with mono-material?
- ✓ Can you use a lighter colour or transparent packaging?
- ✓ Is it possible to change the shape of the packaging to make it more easy to empty?
- ✓ Do you really need such a long shelf life?

## Search for optimization potential:

- ✓ Can we use a label made from the same material as the packaging?
- ✓ Can the label be smaller?
- ✓ How can we make sure, that all materials will get separated (in households or at the latest during the sorting process)?



Questions to answer...

# DESIGN FOR RECYCLING GUIDELINES

# DESIGN GUIDELINES

On the following pages you will find an overview of different types of materials used in packaging.

For each material, we provide you with details on:

1. **Fully compatible** materials, which can be **fully recycled**,
2. **Limited compatible** materials, which can **not be recycled**, but will not hinder the recycling of recyclable materials in the packaging
3. **Low or non-compatible** materials, that can **not be recycled** & will **also obstruct** the recycling of the recyclable materials in the packaging





# DESIGN GUIDELINES



**PET**  
bottles

## BOTTLE BODY:

- transparent or clear, not printed
- PET monomaterial



## CAP:

- use PE or PP  
(density <  $1\text{g/cm}^3$ )

## SLEEVE:

- Density <  $1\text{g/cm}^3$   
→ PE or PP
- smaller than 50%  
of the surface

# DESIGN GUIDELINES



## PET Bottles

Transparent Clear and light-blue

	Yes! ☺	Conditional ☹	No ☹
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>Main Material Bottle</b>	PET		PLA; PVC; PS; PETG
<b>Size</b>			< 4 cm (compacted); > 5 liter content
<b>Colours</b>	Transparent light colours		Opaque; Other transparent colours; Fluorescence; Metallic.
<b>Barrier</b>	SiOx plasma coating.	Carbon plasma-coating; PA multilayer with <5wt% PA and no tie layers; PGA multilayer; PTN alloy.	PA multilayer with >5wt% PA or tie layers; Monolayer PA blend; EVOH.
<b>Additives</b>		UV stabilisers; Acetaldehyde (AA) blockers; Optical brighteners; Oxygen scavengers;	Bio-/oxo-/photodegradable additives; Nanocomposites
<b>Closure Systems</b>	PE (with density <1 g/cm <sup>3</sup> ); PP (with density <1 g/cm <sup>3</sup> );		Materials and blends with density >1 g/cm <sup>3</sup> (e.g. highly filled PE, metals,...); Non-detaching or welded closures.
<b>Liners, Seals and Valves</b>	All with a density < 1 g/cm <sup>3</sup> : - PE; PE + EVA; PP.	Silicone with density <0.95g/cm <sup>3</sup> Foamed PET	Materials with density >1 g/cm <sup>3</sup> (e.g. PVC, silicone, metals)
<b>Labels</b>	Labels in PE; PP; OPP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PET-polymer.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	Labels in EPS, foamed PET or foamed PETG, LDPET (all with density < 1 g/cm <sup>3</sup> ) with a size... Labels in other materials (all with density <1 g/cm <sup>3</sup> ) with a size that does not hinder the recognition of the underlying PET-polymer; Lightly metallized labels; Paper labels without fibre loss	Labels which hinder the recognition of the underlying PET-polymer (e.g. too large, metallised, heavily inked); Labels with density >1 g/cm <sup>3</sup> (e.g. PVC; PS; PET; PETG; PLA); Non-detaching or welded labels; Paper labels with fibre loss Foamed PETG labels (even with density <1 g/cm <sup>3</sup> ); PET labels with washable inks
<b>Sleeves</b>	Sleeves in PE; PP; OPP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PET-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves in EPS; foamed PET or foamed PETG (all with density <1 g/cm <sup>3</sup> ) which do not hinder the recognition of the underlying PET-polymer  INTERIM: Twin-perforated sleeves for household personal care conform guidelines by EPBP	Sleeves which hinder the recognition of the underlying PET-polymer (e.g. too large, metallised, heavily inked);  Sleeves with density >1 g/cm <sup>3</sup> (e.g. PVC; PS; PET; PETG); Foamed PETG sleeves (even with density <1 g/cm <sup>3</sup> ); PET sleeves with washable inks
<b>Tamper Evidence Wrap</b>	PE; PP; OPP; (all with density <1 g/cm <sup>3</sup> )	EPS, Foamed PET or foamed PETG (with density <1 g/cm <sup>3</sup> )	Materials with density >1 g/cm <sup>3</sup> (e.g. metal; PVC; PS; PET, PETG); Metallised materials.
<b>Adhesives for labels</b>	Alkali/water soluble and alkali/water releasable adhesives at 60-80°C without reactivation Water or alkali soluble and/or water-releasable? in 60-80 °C	Hot-melts; Pressure-sensitive labels.	Non-soluble in water or alkaline at 60-80°C; Non-releasable in water or alkaline at 60-80°C Adhesives non-soluble in water or alkaline at 60-80°C
<b>Inks</b>	Non-toxic (according to EUPIA guidelines)		Inks that bleed; Toxic or hazardous inks; Metallic inks
<b>Direct Printing</b>	Laser marked print;	Printed production or expiry date	Any other direct printing
<b>Other Components</b>	Base cup, handles or other components which are separated by grinding and float/sink - all with density <1 g/cm <sup>3</sup> ; Unpigmented PET		Materials with density >1 g/cm <sup>3</sup> (e.g. metal, RFID tags); Non detaching or welded components Coloured PET.

# DESIGN GUIDELINES

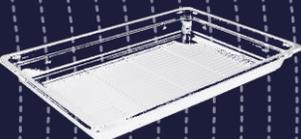


## PET Bottles Transparent Coloured

	Yes! ☺ Full compatibility for reprocessing	Conditional ☹ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material Bottle</b>	PET		PLA; PVC; PS; PETG
<b>Size</b>			< 4 cm (compacted); > 5 liter content
<b>Colours</b>	Transparent light colours	Transparent dark colours	Opaque; Fluorescence; Metallic.
<b>Barrier</b>	SiOx coating; Carbon plasma-coating; PA multilayer with <5wt% PA and no tie layers; PTN alloy.	EVOH multilayer with <3 wt%; EVOH and no tie layers; PA multilayer with <5wt% PA including tie layers; Monolayer PA-blend; PGA multilayer.	EVOH multilayer with >3wt% EVOH or EVOH tie layers. PA multilayer with >5wt% PA or tie layers;
<b>Additives</b>		UV stabilisers; Acetaldehyde (AA) blockers; Optical brighteners; Oxygen scavengers;	Bio-/oxo-/photodegradable additives; Nanocomposites.
<b>Closure Systems</b>	PE (with density <1 g/cm <sup>3</sup> ); PP (with density <1 g/cm <sup>3</sup> );		Materials and blends with density >1 g/cm <sup>3</sup> (e.g. highly filled PE, metals,...); Non-detaching or welded closures.
<b>Liners, Seals and Valves</b>	PE, PE + EVA, PP (all with a density < 1 g/cm <sup>3</sup> ).	Silicone with density <0.95g/cm <sup>3</sup> Foamed PET	Materials with density >1 g/cm <sup>3</sup> (e.g. PVC, silicone, metals)
<b>Labels</b>	Labels in PE; PP; OPP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PET-polymer  * Indication labelsize of bottles > 500 ml: < 70% coverage * Indication labelsize of bottles ≤ 500 ml: < 50% coverage	Labels in EPS, foamed PET, LDPET (all with density <1 g/cm <sup>3</sup> ) with a size that does not hinder the recognition of the underlying PET-polymer; Lightly metallized labels Paper labels without fibre loss	Labels which hinder the recognition of the underlying PET-polymer (e.g. too large, metallised, heavily inked); Labels with density >1 g/cm <sup>3</sup> (e.g. PVC; PS; PET; PETG; PLA); Non-detaching labels or welded labels; Paper labels with fibre loss; Foamed PETG labels (even with density < 1 g/cm <sup>3</sup> ) PET labels with washable inks
<b>Sleeves</b>	Sleeves in PE; PP; OPP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PET-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves in EPS; foamed PET or foamed PETG (all with density <1 g/cm <sup>3</sup> ) which do not hinder the recognition of the underlying PET-polymer INTERIM: Twin-perforated sleeves for household personal care conform guidelines by EPBP	Sleeves which hinder the recognition of the underlying PET-polymer (e.g. too large, metallised, heavily inked);  Sleeves with density >1 g/cm <sup>3</sup> (e.g. PVC; PS; PET; PETG); Foamed PETG sleeves (even with density < 1 g/cm <sup>3</sup> ) PET sleeves with washable inks
<b>Tamper Evidence Wrap</b>	PE; PP; OPP; (all with density <1 g/cm <sup>3</sup> )	EPS, Foamed PET or foamed PETG (with density <1 g/cm <sup>3</sup> )	Materials with density >1 g/cm <sup>3</sup> (e.g. metal; PVC; PS; PETG); Metallised materials. PET with washable inks
<b>Adhesives for labels</b>	Alkali/water soluble and alkali/water releasable adhesives at 60-80°C without reactivation Water or alkali soluble and/or water-releasable in 60-80 °C	Hot-melts; Pressure-sensitive labels.	Non-soluble in water or alkaline at 60-80°C; Non-releasable in water or alkaline at 60-80°C Non-soluble adhesives (or non-water-releasable) in water or alkaline at 60-80°C
<b>Inks</b>	Non-toxic (according to EUPIA guidelines)		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked print;	Printed production or expiry date	Any other direct printing
<b>Other Components</b>	Base cup, handles or other components which are separated by grinding and float/sink - all with density <1 g/cm <sup>3</sup> ; Transparent PET (clear or light colours) /	Transparent PET (dark colours)	Materials with density >1 g/cm <sup>3</sup> (e.g. metal, RFID tags); Non-detaching or welded components;

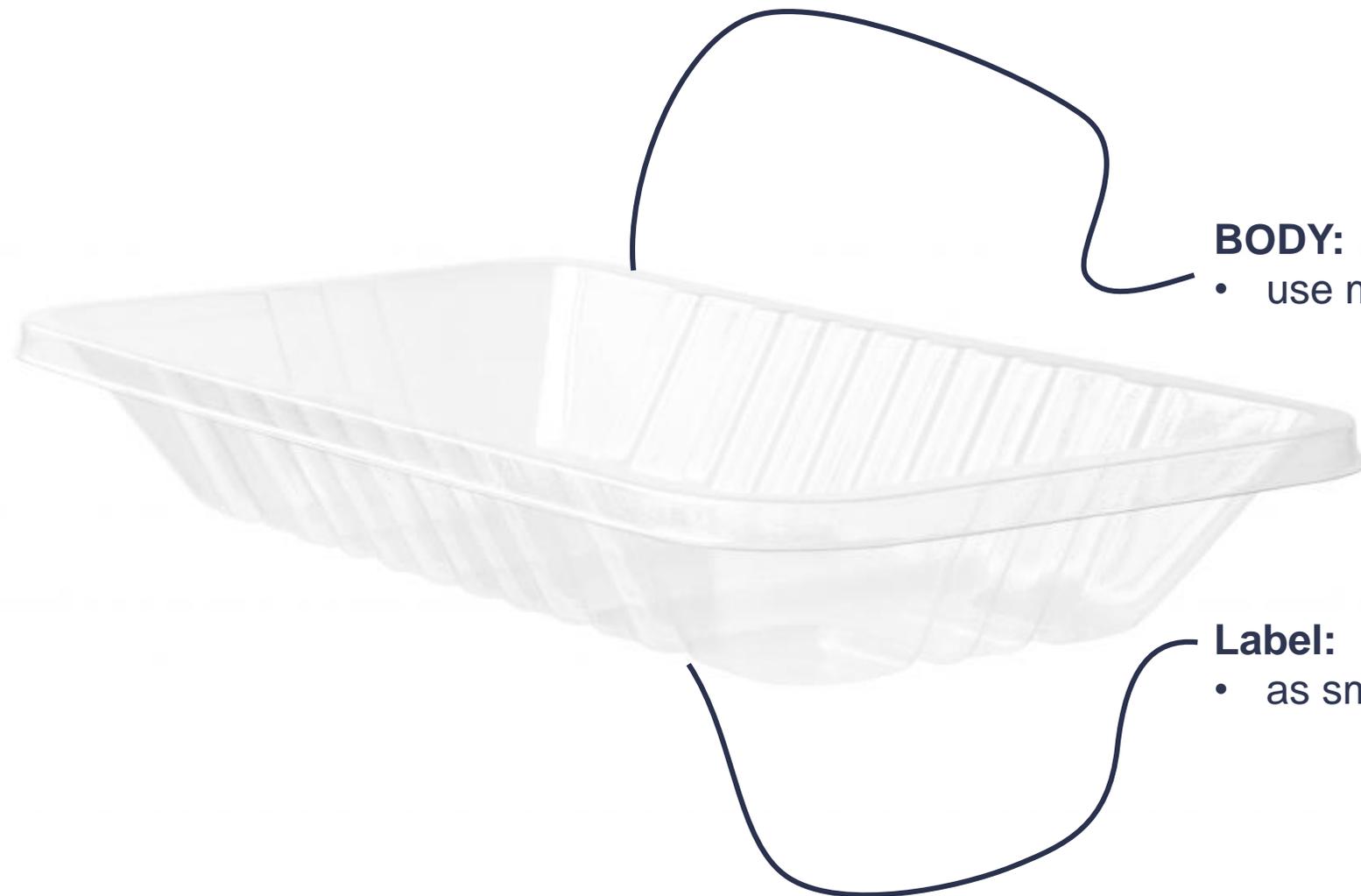


# DESIGN GUIDELINES



**PET**  
**trays**

Transparent clear



**BODY:**

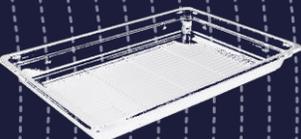
- use monolayer material

**Label:**

- as small as possible



# DESIGN GUIDELINES



**PET**  
**trays**  
Transparent Clear

	Yes! ☺ Full compatibility for reprocessing	Conditional ☹ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material</b>	PET		Any PET based multilayer material including PET/PE; PLA; PVC; PS; PETG; C-PET; PET-GAG; Expanded PET
<b>Colours</b>	Transparent clear; Transparent light blue.		Opaque; Other transparent colours; Metallic; Opaque;
<b>Barrier</b>	PET based oxygen scavenger <u>without</u> yellowing effect after EPBP oven test.	PET based oxygen scavenger <u>with limited</u> yellowing effect after EPBP oven test.	EVOH; PA; any other barrier; any other oxygen scavenger.
<b>Additives</b>	Silicone surface coating (on coating area); Antiblocking masterbatch (max 3%).	UV stabilisers; AA blockers; optical brighteners; antiblocking masterbatch (> 3%); anti-stat agents; antiblocking agents; anti-fogging agents (on coating area)	Bio/Oxo/Photodegradable additives; Nanocomposites
<b>Closure Systems: Lidding films</b>	<b>Unprinted</b> PET; Lidding made from PE, PP, OPP with density < 1 g/cm <sup>3</sup> and easily removal from the tray and without glue residuals; foamed PET		Any other film
<b>Labels</b>	Labels in PE; PP; OPP (all with density <1 g/cm <sup>3</sup> and also in the more heavily prin), with a size that does not hinder* the recognition of the underlying PET-polymer  * Indication labelsize of bottles > 500 ml: < 70% coverage * Indication labelsize of bottles ≤ 500 ml: < 50% coverage  Plastic labels made from PE, PP or OPP with density < 1 g/cm <sup>3</sup> (also in more heavily printed and glued area's) Labelsize of packaging > 500 ml: < 70% coverage Labelsize of packaging ≤ 500 ml: < 50% coverage	BPA-free paper labels without fibre loss during recycling process	Plastic labels with density > 1 g/cm <sup>3</sup> (also in more heavily printed and glued area's); Paper labels with fibre loss during recycling process; Paper labels containing BPA.
<b>Label Adhesives</b>	100% removable adhesives leaving no adhesive residuals on flakes at 70°C.	100% removable adhesives leaving no adhesive residuals on flakes at 85°C.	All other adhesives
<b>Adhesives on other parts than lidding film and labels</b>	Alkali/water soluble and alkali/water releasable adhesives at 60-80°C without reactivation Water or alkali soluble at 60-80°C		Any other adhesive
<b>Inks</b>	Non toxic following the EuPIA Guidelines		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked;	Production or best-before date.	Any other direct printing
<b>Other Components</b>	Inserts in HDPE / LDPE / PP like Soaker pads, bubble pads (all inserts should be completely removable, leave no traces and have a density of <1,0 g/cm <sup>3</sup> )	Paper & cardboard not loosing fibres	PVC / PS / EPS / PU / PA; Thermoset plastics; Metals; Paper & cardboard loosing fibres.



# DESIGN GUIDELINES



PP  
rigids



## BODY:

- use PP monomaterial

## CAP:

- use PE or PP (density < 1g/cm<sup>3</sup>)

## ADDITIVES:

- don't use density changing additives



# DESIGN GUIDELINES

PP  
rigids  
Natural



18 l

	Yes! ☺ Full compatibility for reprocessing	Not conflicting ☹ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material</b>	PP		Multilayers PP with PLA; PVC; PS; PET; PETG
<b>Size</b>		Items compacted < 5 cm	Items compacted < than 2 cm;
<b>Colours</b>	Natural (clear)	Light colours	Black Inner layer; Black; Carbon Black; Other dark colours
<b>Barrier</b>			- EVOH; - PA; - PVDC; - Aluminium
<b>Additives</b>			Additives changing the material density > 1g/cm <sup>3</sup>
<b>Closure Systems</b>	PP	- HDPE; LDPE; LLDPE; MDPE; - PET; PETG; PS; PLA (all with a density >1g/cm <sup>3</sup> ).	- Non-PO and/or foams with density <1g/cm <sup>3</sup> ; - Aluminium; Metal; - PVC
<b>Liners, Seals and Valves</b>	PP	- HDPE; LDPE; LLDPE; MDPE; - PET, PETG, PS, PLA (all with a density >1g/cm <sup>3</sup> ). - Removable aluminium fasteners	- Non-PO and/or foams with density <1g/cm <sup>3</sup> ; - Aluminium; Metal; - Foiled paper; - PVC
<b>Labels</b>	Labels in PP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels in PE (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer; - Labels in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PP-polymer; - Labels in Paper which do not hinder* the recognition of the underlying PP-polymer and without fibreless during the recycling process; - PO-foamed labels  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels that hinder the recognition of the PP; - Paper labels with fibreless during recycling process; - Aluminium; - Metalised labels; - Non-PO foamed labels; - PVC
<b>Sleeves</b>	Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	- Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer; - Sleeves in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PE-polymer.  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves that hinder the recognition of the PE; Sleeves in non PO-materials with density <1 g/cm <sup>3</sup> ; Aluminium; Metalised Sleeves; Heavily inked sleeves; PVC
<b>Adhesives for labels</b>	Water soluble or water releasable adhesive (@ less than	Pressure sensitive labels	Non water soluble or water releasable adhesives;
<b>Inks</b>	Non toxic following the EuPIA Guidelines		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked; Production or best-before date		Any other direct printing
<b>Other Components</b>	PP	PE with density <1 g/cm <sup>3</sup> ; PET; PETG; PS; PLA all with density >1 g/cm <sup>3</sup>	Aluminium; PVC; Glass components; Non-PO and /or foams with density < 1 g/cm <sup>3</sup>



# DESIGN GUIDELINES

PP  
rigids  
Coloured



	Yes! ☺ Full compatibility for reprocessing	Not conflicting ☺ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material</b>	PP		Multilayers PP with PLA; PVC; PS; PET; PETG
<b>Size</b>		Items compacted < 5 cm	Items compacted < than 2 cm;
<b>Colours</b>	All colours	Black inner layer	Black; Carbon black
<b>Barrier</b>		EVOH ≤ 1%	- EVOH > 1%; - PA; - PVDC; - Aluminium
<b>Additives</b>			Additives changing the material density > 1g/cm <sup>3</sup>
<b>Closure Systems</b>	PP	- HDPE; LDPE; LLDPE; MDPE; - PET; PETG; PS; PLA (all with a density >1g/cm <sup>3</sup> ).	- Non-PO and/or foams with density <1g/cm <sup>3</sup> ; - Aluminium; Metal; PVC
<b>Liners, Seals and Valves</b>	PP	- HDPE; LDPE; LLDPE; MDPE; - PET, PETG, PS, PLA (all with a density >1g/cm <sup>3</sup> ). - Removable aluminium fasteners	- Non-PO and/or foams with density <1g/cm <sup>3</sup> ; - Aluminium; Metal; - Foiled paper; PVC
<b>Labels</b>	Labels in PP (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels in PE (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer; - Labels in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PP-polymer; - Labels in Paper which do not hinder* the recognition of the underlying PP-polymer and without fibre loss during the recycling process; - PO-foamed labels  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels that hinder the recognition of the PP; - Paper labels with fibre loss during recycling process; - Aluminium; - Metalised labels; - Non-PO foamed labels; - PVC
<b>Sleeves</b>	Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PP-polymer;  Sleeves in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PP-polymer.  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	- Sleeves that hinder the recognition of the PP; - Sleeves in non PO-materials with density <1 g/cm <sup>3</sup> ; - Aluminium; - Metalised Sleeves; - Heavily inked sleeves; - PVC
<b>Adhesives for labels</b>	Water soluble or water releasable adhesive (@ less than 40°C)	Pressure sensitive labels	Non water soluble or water releasable adhesives;
<b>Inks</b>	Non toxic following the EuPIA Guidelines		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked; Production or best-before date	Any other direct printing	
<b>Other Components</b>	PP	PE with density <1 g/cm <sup>3</sup> ; PET; PETG; PS; PLA all with density >1 g/cm <sup>3</sup>	Aluminium; PVC; Glass components; Non-PO and /or foams with density < 1 g/cm <sup>3</sup>



# DESIGN GUIDELINES



PP  
flexibles

## BODY:

- use light and transparent colours
- don't use inks





# DESIGN GUIDELINES



**PP**  
**flexibles**  
Natural

	Yes! 😊	Conditional 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>Main Material</b>	PP	multilayer PE/PP	any other polymer (ex. PET, PVC, etc.)
<b>Colours</b>	unpigmented; transparent	light colours; translucent colours	dark colours; black; carbon black
<b>Barrier</b>	barrier in the polymer matrix; SiOx and AlOx without additional coatings	EVOH (in polyolefin combination film); metalized layers without coatings	barrier layer PVC, PVDC, PA; any other barrier layer; foaming agents used as expandant chemical agents; aluminium
<b>Additives</b>			Bio-/oxo-/photodegradable additives; additives concentration > 0,97 g/cm <sup>3</sup>
<b>Closure Systems</b>	PP	PE, PET, PETG, PS, PLA	metal, aluminium, PVC, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Liners, Seals and Valves</b>	PP	PE, PET, PETG, PS, PLA, removable aluminium fasteners	metal, aluminium, PVC, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Labels</b>	PP	PE, paper labels without fiberloss	metallized labels, any other; paper labels with fibreloss
<b>Adhesives</b>	Water soluble or water-releasable at less than 60°C		Adhesives non-soluble in water or non-releasable in water at less than 60°C
<b>Inks</b>	no inks	Non-toxic (according to EUPIA guidelines)	Inks that bleed; Toxic or hazardous inks
<b>Direct Printing</b>	Laser marked print; Printed production or expiry date	printing covering < 50%**	printing covering > 50%**
<b>Other Attachments</b>	PP	PE, PET, PETG, PS, PLA	metal, aluminium, PVC, paper, foams with density < 1 g/cm <sup>3</sup>

\*\*temporary solution



# DESIGN GUIDELINES



**PP**  
**flexibles**  
Coloured

	Yes! 😊	Conditional 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>Main Material</b>	PP	multilayer PE/PP	any other polymer (ex. PET, PVC, etc.)
<b>Colours</b>	light colours; translucent colours	dark colours (NIR detectable)	Non-NIR detectable colours
<b>Barrier</b>	barrier in the polymer matrix; SiOx and AlOx without additional coatings	EVOH (in polyolefin combination film); metalized layers without coating	barrier layer PVC, PVDC, PA; any other barrier layer; foaming agents used as expandant chemical agents; aluminium
<b>Additives</b>			Bio-/oxo-/photodegradable additives; additives concentration > 0,97 g/cm <sup>3</sup>
<b>Closure Systems</b>	PP	PE, PET, PETG, PS, PLA	metal, aluminium, PVC, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Liners, Seals and Valves</b>	PP	PE, PET, PETG, PS, PLA, removable aluminium fasteners	metal, aluminium, PVC, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Labels</b>	PP	PE, paper labels without fiberloss	metallized labels, any other; paper labels with fibreless
<b>Adhesives</b>	Water soluble or water-releasable at less than 60°C		Adhesives non-soluble in water or non-releasable in water at less than 60°C
<b>Inks</b>	no inks; non-toxic (according to EUPIA guidelines)		Inks that bleed; Toxic or hazardous inks
<b>Direct Printing</b>	Laser marked print; Printed production or expiry date; printing covering < 50%**	printing covering > 50%**	
<b>Other Attachments</b>	PP	PE, PET, PETG, PS, PLA	metal, aluminium, PVC, paper, foams with density < 1 g/cm <sup>3</sup>



# DESIGN GUIDELINES



**HDPE**  
rigids

## BODY:

- use HDPE monolayer
- no carbon black colourisation



## CAP:

- only use PP

## LABELS:

- use labels from the same material (only PE)



**HDPE**  
**rigids**  
Natural

# DESIGN GUIDELINES

	Yes! ☺ Full compatibility for reprocessing	Not conflicting ☹ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material</b>	HDPE; Multilayer HDPE with other PE (LLDPE, LDPE, MDPE).		Multilayers HDPE with PLA; PVC; PS; PET; PETG
<b>Size</b>		Items compacted < 5 cm	Items (compacted) < than 2 cm;
<b>Colours</b>	Natural (clear);	Light colours	Black Inner layer; Black; Carbon Black; Other dark colours
<b>Barrier</b>	EVOH < 6.0%wt + 3.0% PE-g-MAH tie layers with MAH > 0.1%wt; Enkase (fluorination);	EVOH > 6.0%wt + 3.0% PE-g-MAH tie layers with MAH > 0.1%wt; EVOH <1% with any other tie layers.	EVOH > 1% with any other tie layers; PA; PVDC; Aluminium
<b>Additives</b>			Additives changing the material density > 1g/cm <sup>3</sup>
<b>Closure Systems</b>	HDPE; LDPE; LLDPE; MDPE	PP; PET; PETG; PS; PLA (all with a density >1g/cm <sup>3</sup> ).	Non-PO and/or foams with density <1g/cm <sup>3</sup> ; Aluminium; Metal; PVC
<b>Liners, Seals and Valves</b>	HDPE; LDPE; LLDPE; MDPE	PP; PET, PETG, PS, PLA (all with a density >1g/cm <sup>3</sup> ). Removable aluminium fasteners	Non-PO and/or foams with density <1g/cm <sup>3</sup> ; Aluminium; Metal; Foiled paper; PVC
<b>Labels</b>	Labels in HDPE, LDPE, LLDPE, MDPE (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer; - Labels in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PE-polymer. - Labels in Paper which do not hinder* the recognition of the underlying PE-polymer and without fibreless during the recycling process - PO-foamed labels  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	Labels that hinder the recognition of the PE; Paper labels with fibreless during recycling process Metalised labels Non-PO foamed labels PVC
<b>Sleeves</b>	Sleeves in HDPE; LDPE; LLDPE; MDPE (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer;  Sleeves in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PE-polymer.  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	Sleeves that hinder the recognition of the PE; Sleeves in non PO-materials with density <1 g/cm <sup>3</sup> ; Aluminium; Metalised Sleeves; Heavily inked sleeves; PVC.
<b>Adhesives for labels</b>	Water soluble or water releasable adhesive (@ less than 40°C)	Pressure sensitive labels	Non water soluble or non water releasable adhesives
<b>Inks</b>	Non toxic following the EuPIA Guidelines		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked; Production or best-before date.		Any other direct printing
<b>Other Components</b>	HDPE, LDPE, LLDPE, MDPE	PP; PET; PETG; PS; PLA all with density >1 g/cm <sup>3</sup> .	Aluminium; PVC; Glass components; Foams with density < 1 g/cm <sup>3</sup> .



# DESIGN GUIDELINES



**HDPE**  
**rigids**  
Coloured

	Yes! ☺ Full compatibility for reprocessing	Not conflicting ☺ Limited compatibility for reprocessing	No ☹ Low (or no) compatibility for reprocessing
<b>Main Material</b>	HDPE; Multilayer HDPE with other PE (LLDPE, LDPE, MDPE).		Multilayers HDPE with PLA; PVC; PS; PET; PETG
<b>Size</b>		Items compacted < 5 cm	Items (compacted) < than 2 cm;
<b>Colours</b>	All colours	Black inner layer	Black; Carbon black;
<b>Barrier</b>	EVOH < 6.0%wt + 3.0% PE-g-MAH tie layers with MAH > 0.1%wt; Enkase (fluorination);	EVOH > 6.0%wt + 3.0% PE-g-MAH tie layers with MAH>0.10wt%; EVOH <1% with any other tie layers;	EVOH > 1% with any other tie layers; PA; PVDC; Aluminium
<b>Additives</b>		Additives NOT changing the material density > 1 g/cm <sup>3</sup>	Additives changing the material density > 1g/cm <sup>3</sup>
<b>Closure Systems</b>	HDPE; LDPE; LLDPE; MDPE	PP; PET; PETG; PS; PLA (all with a density >1g/cm3).	Non-PO and/or foams with density <1g/cm3; Aluminium; Metal; PVC
<b>Liners, Seals and Valves</b>	HDPE; LDPE; LLDPE; MDPE	PP; PET, PETG, PS, PLA (all with a density >1g/cm3). Removable aluminium fasteners; Metalisation.	Non-PO and/or foams with density <1g/cm3; Aluminium; Metal; Foiled paper; PVC
<b>Labels</b>	Labels in HDPE, LDPE, LLDPE, MDPE (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	- Labels in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer; - Labels in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PE-polymer. - Labels in Paper which do not hinder* the recognition of the underlying PE-polymer and without fibre loss during the recycling process - Labels without fibre loss - PO-foamed labels.  * indication label size of bottles > 500 ml: < 70% coverage * indication label size of bottles ≤ 500 ml: < 50% coverage	Labels that hinder the recognition of the PE; Paper labels with fibre loss during recycling process Metallised labels; Non-PO foamed labels; PVC
<b>Sleeves</b>	Sleeves in HDPE; LDPE; LLDPE; MDPE (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	- Sleeves in PP (with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PE-polymer; - Sleeves in PET, PETG, PS, PLA (all with density >1 g/cm <sup>3</sup> ) which do not hinder* the recognition of the underlying PE-polymer.  * Indication sleevesize of bottles > 500 ml: < 70% coverage * Indication sleevesize of bottles ≤ 500 ml: < 50% coverage	- Sleeves that hinder the recognition of the PE; - Sleeves in non PO-materials with density <1 g/cm3 ; - Aluminium; - Metallised sleeves; - Heavily inked sleeves - PVC
<b>Adhesives for labels</b>	Water soluble or water releasable adhesive (@ less than 100µm)	Pressure sensitive labels	Non water soluble or non water releasable adhesives
<b>Inks</b>	Non toxic following the EuPIA Guidelines		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked; Production or best-before date.	Any other direct printing	
<b>Other Components</b>	HDPE, LDPE, LLDPE, MDPE	PP with density <1 g/cm <sup>3</sup> ; PET; PETG; PS; PVC; PLA all with density >1 g/cm <sup>3</sup> .	Aluminium; PVC; Glass components; Non-PO and/or Foams with density < 1 g/cm <sup>3</sup> .



# DESIGN GUIDELINES



**LDPE**  
**flexibles**

## **BODY:**

- use light and transparent colours
- don't use inks





# DESIGN GUIDELINES



**LDPE**  
**flexibles**  
Natural

	Yes! 😊	Conditional 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>Main Material</b>	PE-LD, PE-LLD; PE-HD	multilayer PE/PP	any other polymer (ex. PET, PVC, etc.)
<b>Colours</b>	unpigmented; transparent	light colours; translucent colours	dark colours; black; carbon black
<b>Barrier</b>	barrier in the polymer matrix, SiOx and AlOx without additional coatings	< 5% EVOH (in polyolefin combination film); metalized layers; EcoLam High Plus; VO+ LLDPE	> 5% EVOH (in polyolefin combination film); barrier layer PVC, PVDC, PA; any other barrier layer; foaming agents used as expandant chemical agents; aluminium
<b>Additives</b>			Bio-/oxo-/photodegradable additives; additives concentration > 0,97 g/cm <sup>3</sup>
<b>Closure Systems</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA	metal, aluminium, PVC, non PO or foams with density < 1
<b>Liners, Seals and Valves</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA, removable aluminium fasteners	metal, aluminium, PVC, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Labels</b>	PE	PP, paper labels without fiberloss	metallized labels, any other; paper labels with fibreless
<b>Adhesives</b>	Water soluble or water-releasable at less than 60°C		Adhesives non-soluble in water or non-releasable in water at less than 60°C
<b>Inks</b>	no inks	Non-toxic (according to EUPIA guidelines)	Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked print; Printed production or expiry date	printing covering < 50%**	printing covering > 50%**
<b>Other Attachments</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA	metal, aluminium, PVC, paper, foams with density < 1 g/cm <sup>3</sup>

\*\*temporary solution



# DESIGN GUIDELINES



**LDPE**  
**flexibles**  
Coloured

	Yes! 😊	Conditional 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>Main Material</b>	PE-LD, PE-LLD; PE-HD	multilayer PE/PP	any other polymer (ex. PET, PVC, etc.)
<b>Colours</b>	light colours; translucent colours	dark colours (NIR-detectable)	Non-NIR detectable colours
<b>Barrier</b>	barrier in the polymer matrix; SiOx and AlOx without additional coatings	< 5% EVOH (in polyolefin combination film); metalized layers; EcoLam High Plus; VO+ LLDPE	> 5% EVOH (in polyolefin combination film); barrier layer PVC, PVDC, PA; any other barrier layer; foaming agents used as expandant chemical agents; aluminium
<b>Additives</b>			Bio-/oxo-/photodegradable additives; additives concentration > 0,97 g/cm <sup>3</sup>
<b>Closure Systems</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA	metal, aluminium, PVC, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Liners, Seals and Valves</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA, removable aluminium fasteners	metal, aluminium, PVC, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
<b>Labels</b>	PE	PP, paper labels without fiberloss	metallized labels, any other; paper labels with fiberloss
<b>Adhesives</b>	Water soluble or water-releasable at less than 60°C		Adhesives non-soluble in water or non-releasable in water at less than 60°C
<b>Inks</b>	no inks; non-toxic (according to EUPIA guidelines)		Inks that bleed; Toxic or hazardous inks.
<b>Direct Printing</b>	Laser marked print; Printed production or expiry date; printing covering < 50%**	printing covering > 50%**	
<b>Other Attachments</b>	PE-LD, PE-LLD, PE-HD	PP, PET, PETG, PS, PLA	metal, aluminium, PVC, paper, foams with density < 1 g/cm <sup>3</sup>

\*\*temporary solution



# DESIGN GUIDELINES



PS

polystyrene

## BODY:

- use light and transparent colours
- just minimal printing





# DESIGN GUIDELINES



**PS**  
polystyrene

	Yes! 😊	Not conflicting 😊	No 😞
	<b>Full compatibility for reprocessing</b>	<b>Limited compatibility for reprocessing</b>	<b>Low (or no) compatibility for reprocessing</b>
Main Material	PS		
Colours	Clear or lightly tinted colours	Opaque	Dark colorants with carbon black
Closure Systems	PS; OPS; PBT/PS; PS with PE insert; PS with EVA insert	Polyolefins, lightweight aluminium foil Lightweight lidding films: Metalized PET; metalized OPP; combi PET/light paper;	Heavyweight aluminium foil; Multilayers; PET; PETG; PVC; Aluminium/steel;
Labels and Adhesives	PS; PS/OPS (same density as main material)	Polyolefin; Paper; IML Non-PS-cover with Packaging > 500 ml: < 70% coverage area and Packaging ≤ 500 ml: < 50% coverage on surface; Adhesives water soluble	PET; PETG; PVC; metalised labels; Adhesives not soluble in water
Inks		Non toxic following the EuPIA Guidelines	Inks that bleed; toxic or hazardous inks

*PS is only being recycled in a limited amount of countries*



# DESIGN GUIDELINES



## Paper & cardboard

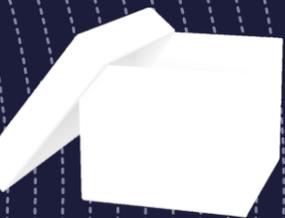
### BODY:

- use only paper
- water based inks





# DESIGN GUIDELINES



## Paper & cardboard

	Yes! 😊	Not conflicting 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
<b>General (according to DIN643)</b>	natural fibre-based paper and board suitable for recycling;	Unwanted material (outthrows) max 1.5% Non-paper components, paper and board not according to grade definition, paper and board conflicting with production, paper not suitable for de-inking	Prohibited Material (any material which present a hazard for health, safety and environment, such as medical waste, contaminated products of personal hygiene, hazardous waste, organic waste including foodstuffs, bitumen, toxic powders and similar)
<b>Main Material</b>	Paper fibres	Polyolefins (PE, PP); Aluminium	
<b>Colours</b>		Suitable for de-inking	Non-de-inking
<b>Coating &amp; laminations</b>	Without coating or lamination	One-sided plastic coating or plastic laminate, if fibre content is > the country specific threshold	Two-sided plastic coating or plastic laminate, if fibre content < country specific threshold
<b>Barrier</b>		Coating	Foil lined papers
<b>Labels and Adhesives</b>	Hotmelts with a softening point > 68°C and layer thickness of > 120µm	Water soluble adhesives	Insoluble adhesives; heavy foils; Latex/Hotmelt; Self-Adhesive; Polycoat Wax; Hotmelts with a softening point < 68°C
<b>Additives</b>	mineral filler (talc, kaolin, TiO <sub>2</sub> , starch, calcium carbonate)		Wet strength agents, as far as fibre recovery and recycling is not proven; components of EuPIA
<b>Inks</b>		Non toxic following the EuPIA Guidelines	Inks that bleed; toxic or hazardous inks (Inks that are on the EuPIA exclusion list)

*In a lot of countries combination of cardboard and plastic is not allowed in the collection system*



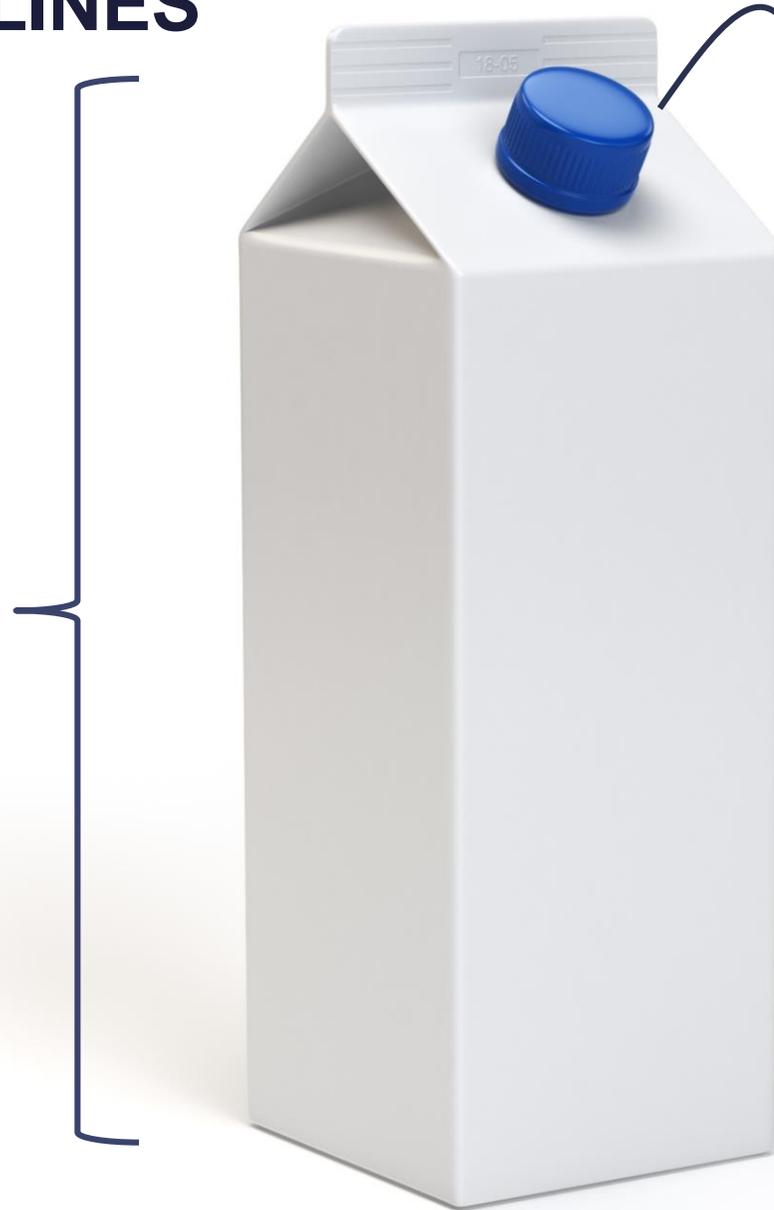
# Drinking cardboard

33 |

## DESIGN GUIDELINES

### BODY:

- only paper, aluminium and polyolefins



### CAP:

- only aluminium and polyolefins



# DESIGN GUIDELINES



Drinking  
cardboard

34 l

	Yes! 😊	Not conflicting 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
Main Material	Paper fibres	Polyolefins (PE, PP), aluminium	
Colours	All colours		
Barrier		Polyolefins (PE, PP), aluminium	Wax, any other barrier solution except aluminium and polyolefins
Closure Systems		Polyolefins (PE, PP), aluminium	
Labels and Adhesives			Insoluble dispersing adhesives, Latex, hotmelt and wet-strength adhesives
Inks		Non toxic following the EuPIA Guidelines	Inks that bleed; toxic or hazardous inks (Inks that are on the EuPIA exclusion list), metal inks
Other Components		Wet strength agents, as far as fibre recovery and recycling is not proven; components of EuPIA	



# DESIGN GUIDELINES



Glass

## BODY:

- Use transparent glass
- Do not print directly on the glass



## LABEL:

- use small and washable labels



# DESIGN GUIDELINES



Glass

	Yes! 😊	Not conflicting 😐	No 😞
	Full compatibility for reprocessing	Limited compatibility for reprocessing	Low (or no) compatibility for reprocessing
Main Material	Glas; Ferro metals, Non-ferro metals	Glas composities with metal or plastic layers	Pyrex (oven-proof glass), chrystal
Colours	All colours (focus to the separately collected colours white, green and brown)		
Closure Systems	Polyolefins and metals (including aluminium)	Other	
Labels and Adhesives		All	
Inks			Heavy metal inks;
Direct Printing		Solid colours direct print on glass	
Other Components			



# DESIGN GUIDELINES



**Metal  
ferro**

+ avoid residues after usage



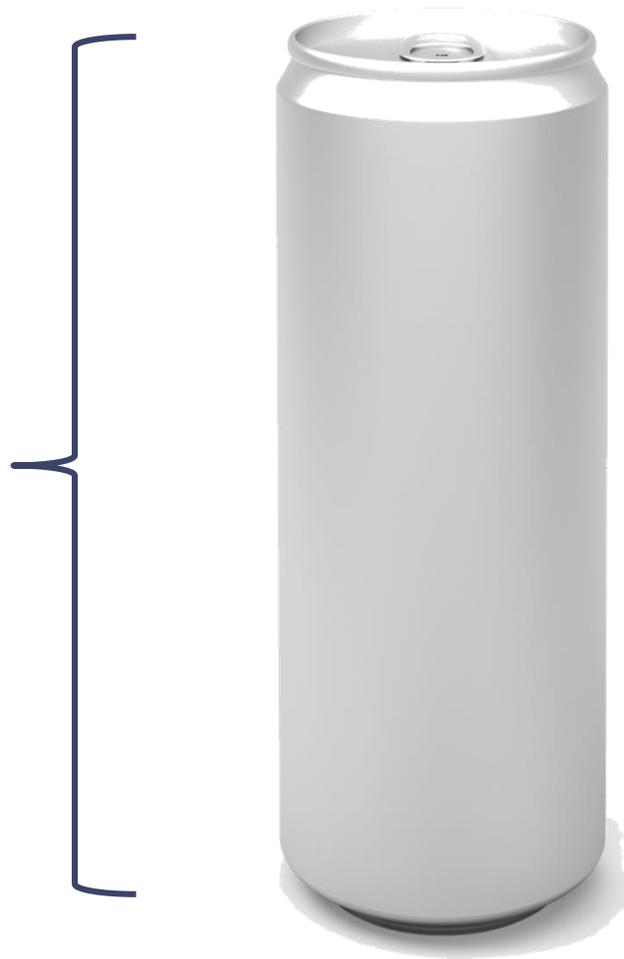


# DESIGN GUIDELINES



**Metal  
non-ferro**

+ avoid residues after usage



# Summary

- Use light or transparent colours
- Avoid material mix and use mono-material instead
- Use barriers, labels, caps, ... which are compatible with the recycling of the major material
- Optimize labels and caps
- Make sure that the different (material) components get separated while sorting
- Don't use substances hazardous to recycling (bleeding inks, not washable glues, labels from different material, additives, silicon, ...)

## Disclaimer:

The information provided in these guidelines is for general information purpose only. To our knowledge, the information was accurate at the time of writing. However, as the recycling industry is still in the process of coming to standards, errors, differences and changes will occur. Please be aware that there will be local differences in the infrastructure for collection, sorting & recycling of packaging waste. This will ultimately determine the locally valid guidelines.

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# Going Further - Our support for you:



**Do not hesitate to contact us!**

Email: [circpack@suez.com](mailto:circpack@suez.com)