

**DRAFT**

Improve the recyclability of 5 types of plastic packaging

version for consultation

The Hague, October 2016, Version 0.5



Netherlands Institute  
for Sustainable Packaging

## Introduction

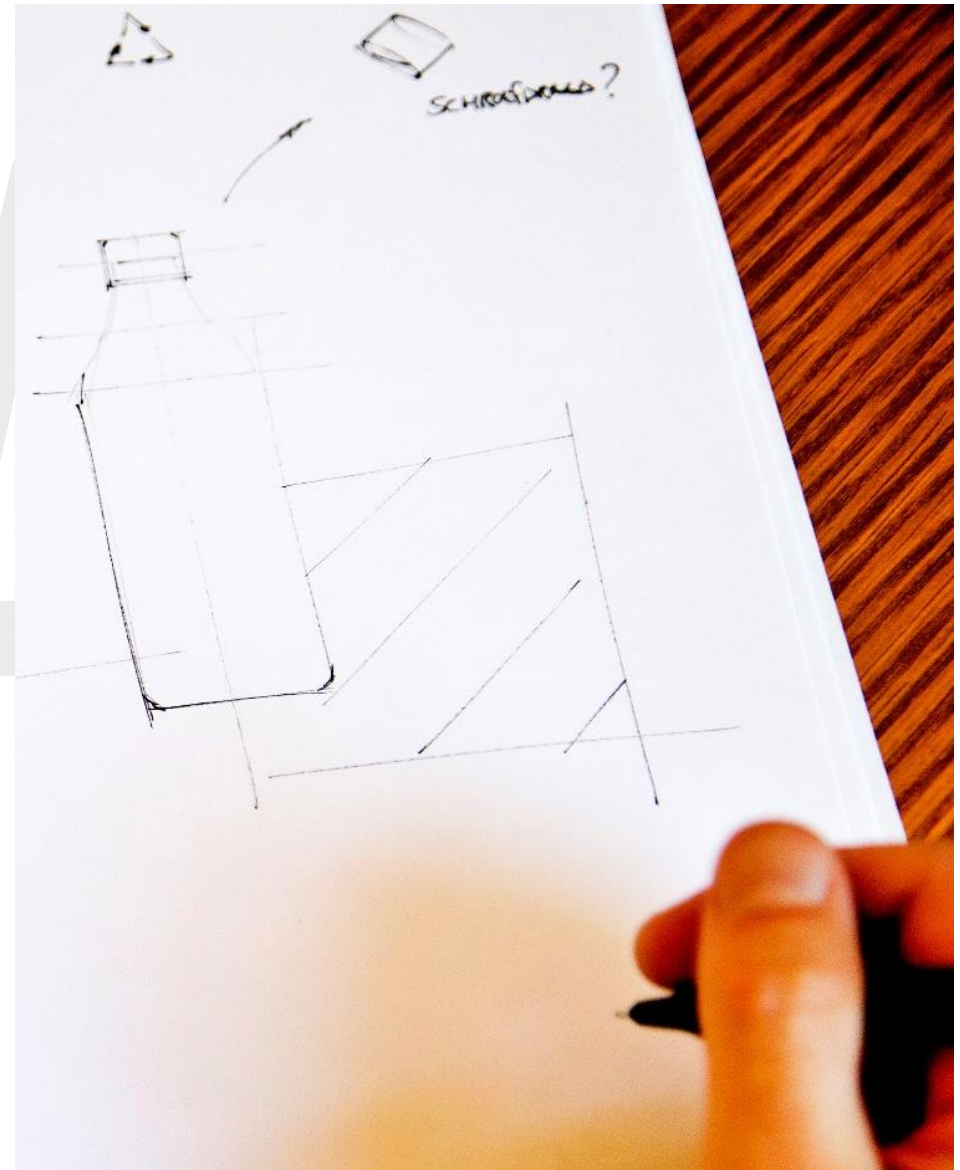
The main purpose of packaging is protecting the product. The most sustainable packages make sure that the product is available on the desired moment, in good condition. Spoiling the product creates a bigger environmental impact than the use of the packaging (even up to ten times). This means the packaging must be fit for purpose: protect the product, use the least material possible.

With protection in mind there are still steps to undertake to improve the recyclability of packaging. Designing packaging with circularity in mind minimises the environmental impact and contributes to cost-savings in materials, energy, transport and disposal.

The Netherlands Institute for Sustainable packaging (KIDV) wants to help designers, developers and buyers of packaging as well as marketers to make choices that make their packaging more recyclable. As a start, the KIDV drafted this document for consultation, concerning tips and tricks to improve the recyclability of 5 types of plastic packaging. It is a living document: in 2017 the KIDV will extend the content of this document with other types of packaging. These will also be submitted for consultation.

## About the KIDV

The Netherlands Institute for Sustainable packaging (KIDV) is set up to gain and share knowledge on packaging and sustainability. The stakeholders and founders of the institute are the Dutch Ministry of environment, the Dutch municipalities and the Dutch producers of packed goods. [www.kidv.nl](http://www.kidv.nl)



### About this document & the consultation

We have drafted this version of the document using knowledge about the entire packaging chain, from the design of packaging, via the sorting stations and the recycling process. If available, knowledge of existing platforms is used, like the European PET Bottle Platform and Plastics Recyclers Europe.

### Presentation

In the consultation the KIDV asks designers, developers, buyers and marketers to give their input on the presentation of the information? Is the information useful and extensive enough? What do they think about the look and feel? Is the presentation inviting to encourage the actual use of the information

### Content

In the consultation the KIDV would like to receive more input from specifically sorters and recyclers to give their input on the content. Additional tips and tricks to improve the recyclability of all packaging types are welcome.

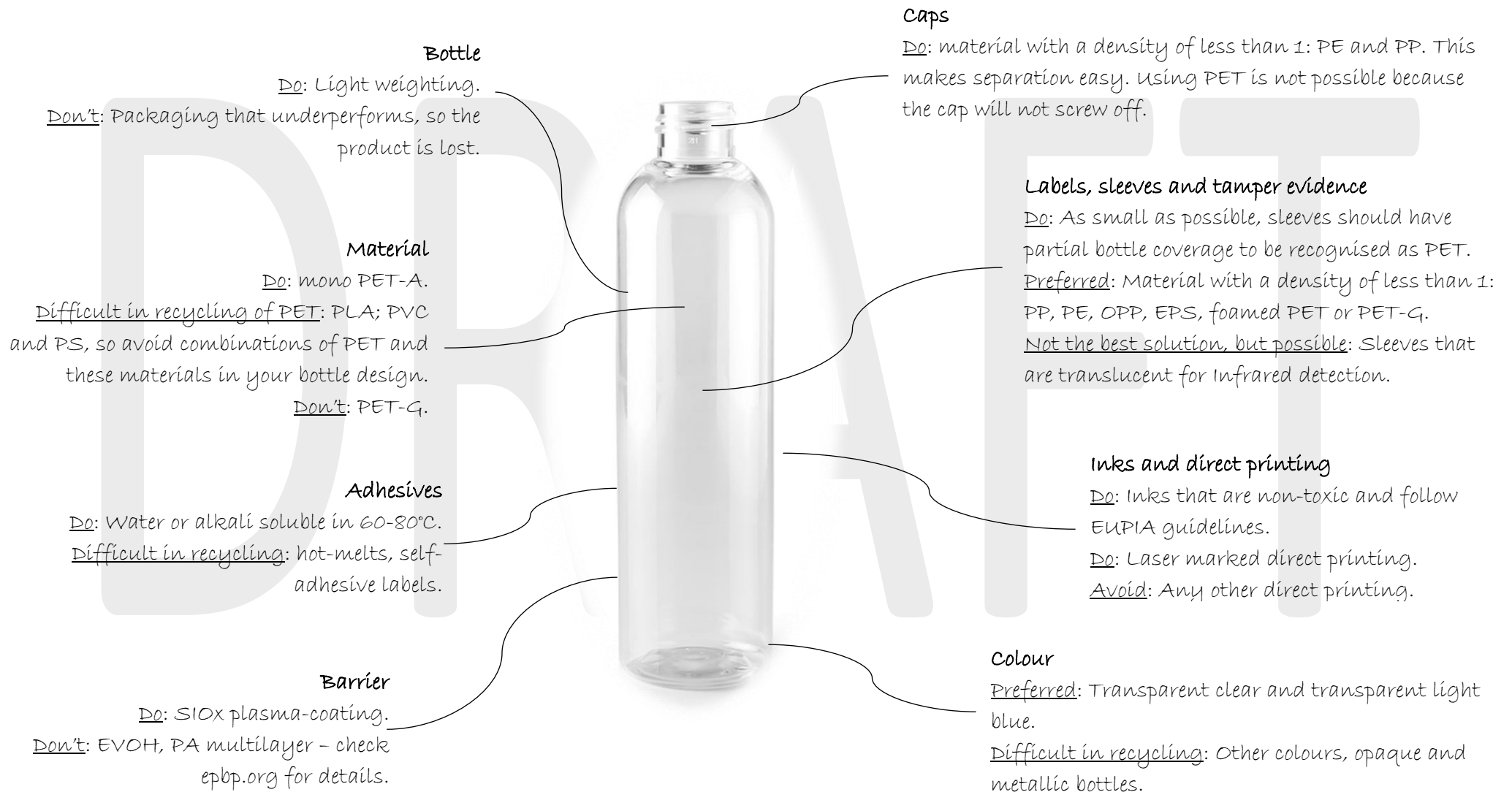
### Join the consultation!

The consultation will be open during November 2016. Please join! You can use this online form to give input on this document: <https://goo.gl/forms/fwXyAp1HhppAjwfy2>. In December 2016 the KIDV will evaluate and consolidate the given comments. In January 2017 a new version of the document will be published.

### Ten tips to get you started:

1. Make sure the product is well protected, but don't overprotect, use the least material possible.
2. Make the packaging easy to empty.
3. Make the packaging easy to densify (flatten) after use.
4. Label the packaging to facilitate collection by consumers.
5. Avoid harmful materials.
6. Use, if possible, material from more sustainable resources. For instance recycled material and/or renewable resources. Only use multi-material solutions that are environmentally more beneficial.
7. Make the most use of space, within the packaging and logistics. This could also mean concentrating the product.
8. Consider the waste management within your own company.
9. Try to involve other parties in the packaging chain in your project, like sorters and recyclers.
10. Get started!

# How to improve the recyclability of [1] injection blow moulded PET bottles



Want to share your input?

Click [here](#) to join the consultation.

More information:

[www.epbp.org](http://www.epbp.org)

# How to improve the recyclability of [2] thermoform PET trays



Want to share your input?

Click [here](#) to join the consultation.

**Secondary package**

Do: Fit for purpose, if the tray is redesigned, check if the box needs an update too.

**More information?**

[www.plasticsrecyclers.eu](http://www.plasticsrecyclers.eu)

# How to improve the recyclability of [3] HDPE bottles

## Bottle

Do: Light weighting.

Don't: Packaging that underperforms, so the product is lost.

## Material

Do: mono PE.

## Adhesives

Do: Water or alkali soluble in 60-80°C.

Difficult in recycling: hot-melts, self-adhesive labels.

## Barrier

Only if there is no other solution: EVOH and PA.

Don't: PVDC, any additives that increase the density of HDPE.

## Closures and caps

Do: all types of PE (HDPE, MDPE, LDPE, LLDPE), PE with EVA, PP and OPP.

Don't: metal, aluminium, PS and PVC.

## Labels, sleeves and tamper evidence

Do: As small as possible, sleeves should have partial bottle coverage to be recognised as HDPE.

Preferred: all types of PE (HDPE, MDPE, LDPE, LLDPE), PP and OPP.

Don't: PVC/PS/aluminium/ metallised labels.

## Inks and direct printing

Do: Inks that are non-toxic and follow EUPA guidelines.

Do: Laser marked direct printing.

Avoid: Any other direct printing.

## Secondary package

Do: Fit for purpose, if the bottle is redesigned, check if the box needs an update too.

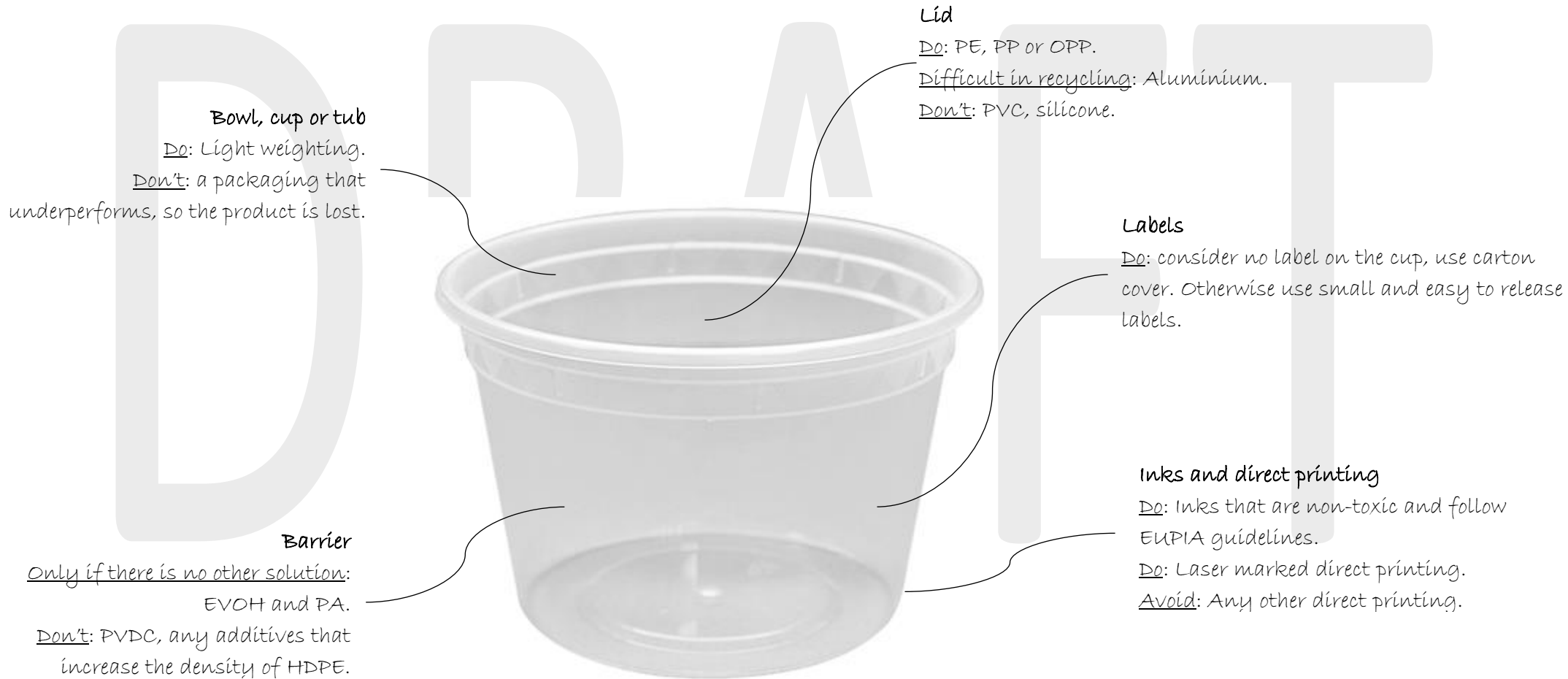
## More information?

[www.pack4recycling.be](http://www.pack4recycling.be)

## Want to share your input?

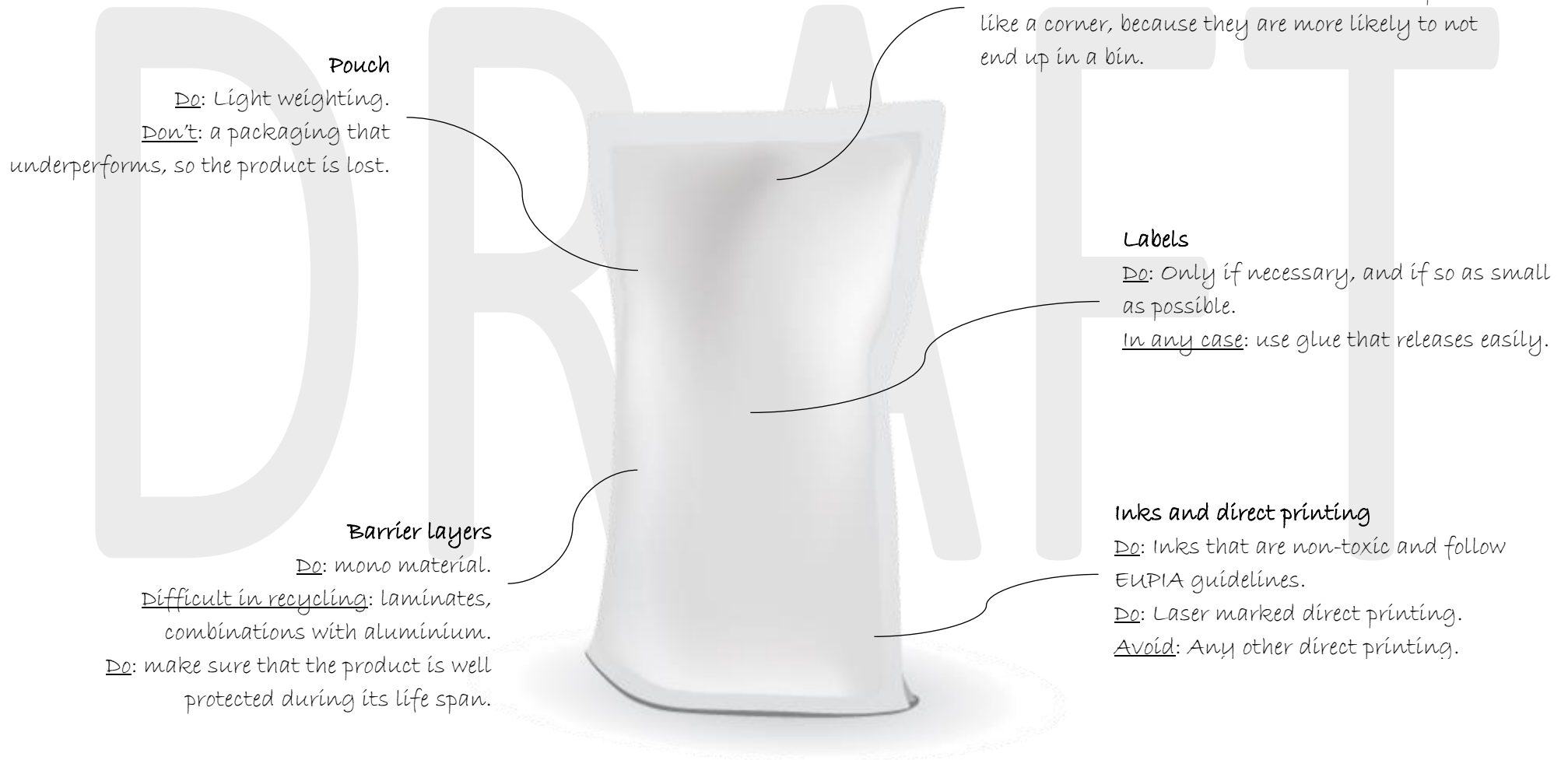
Click [here](#) to join the consultation.

# How to improve the recyclability of [4] PP bowls, cups or tubs



Want to share your input?  
Click [here](#) to join the consultation.

# How to improve the recyclability of [5] pouches



## Pouch

Do: Light weighting.

Don't: a packaging that underperforms, so the product is lost.

## Zippers etc.

Do: Make sure that there are no small loose parts, like a corner, because they are more likely to not end up in a bin.

## Labels

Do: Only if necessary, and if so as small as possible.

In any case: use glue that releases easily.

## Barrier layers

Do: mono material.

Difficult in recycling: laminates, combinations with aluminium.

Do: make sure that the product is well protected during its life span.

## Inks and direct printing

Do: Inks that are non-toxic and follow EUPIA guidelines.

Do: Laser marked direct printing.

Avoid: Any other direct printing.

## Secondary package

Do: Fit for purpose, if the pouch is redesigned, check if the box needs an update

Want to share your input?

Click [here](#) to join the consultation.



## Glossary

- EVOH - Etheen-vinylalcohol
- PA - Polyamide (also known als nylon)
- PE - Polyetheen
- HDPE - High Density Polyetheen
- LDPE - Low Density Polyetheen
- LLDPE - Liniair Low Density Polyetheen
- PET (PET-A) - Polyethyleentereftalaat
- PET-G - Polyethyleentereftalaatglycol
- PLA - Polylactic acid
- PVC - Polyvinyl chloride
- SiOX - Silicon oxide

## Full links:

- PET tray: Design for recycling guidelines of plastic recyclers Europe <http://www.plasticsrecyclers.eu/news/pet-trays-recycling-guidelines>
- PET bottle: Design for recycling guidelines of European bottle producers <http://www.epbp.org/design-guidelines/products>
- HDPE bottle: Pack4recycling of Fostplus: <http://www.pack4recycling.be/nl/content/flessen-flacons-hdpe>

## Sources of pictures:

- Tray: <http://www.szp.co.il/modules/products/filter.php?category=Wholesalers>
- Pet bottle: <http://packagingoptionsdirect.com/12-oz-bullet-round-clear-pet-plastic-bottle>
- Cup: <http://www.lollicupstore.com/fp-imdc16-pp>
- Pouch: <http://ilapak.com/Packaging-Solutions/Pack-Styles/Doy-style>
- HDPE bottle: <http://packagingoptionsdirect.com/8-oz-cylinder-round-white-hdpe-plastic-bottle>