EMBALLAGERETUR

DATA FOR ECO MODULATION

GUIDE

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EMBALLAGERETUR

USE OF GUIDELINES

What can it do?
This guide is your inspiration for what packaging data is necessary obtaning if you want your packaging to be eco modulated at either the **green** or **yellow** level. The focus is on the technical part of the packaging data and the understanding of the packaging components.

For whom?
The guidance is, among others, relevant for those of you who want to obtain your packaging master data from other parties in your value chain.

Why is it relevant?
The purpose of working with your data from a master data perspective makes your data collection useful not only in Denmark, but also in the EU and internationally. It also means that it is preparatory for the implementation of the PPWR (EU Packaging Waste Regulation).

The guidance is based on the Packaging Executive Order BEK no. 323 of 20/03/2025, Appendix 14, and the Danish Environmental Protection Agency's guidance for eco modulation.

Use is at your own risk and does not hold Emballageretur legally liable in the event of any errors or a company's failure to obtain data. You will always be responsible for adhering to the design criteria set out in the executive order.

BASICS YOU NEED TO KNOW

Packaging unit: a unit, including any integrated or separate components, which as a whole performs a packaging function, such as wrapping, protecting, handling, delivering, storing, transporting or presenting products, and includes independent units of multipack or transport packaging if they are disposed of before arrival at the point of sale.

Main component: a packaging component that has the highest weight in the packaging unit.

Integrated component: a packaging component, whether of the same material as or different from the main body of the packaging unit, which is integrated into the packaging unit and its function, which does not need to be separated from the main body of the packaging unit to ensure the functionality of the packaging unit, and which is typically disposed of at the same time as the main body of the packaging unit, although it is not necessarily disposed of by the same disposal method.

Separate component: a packaging component, whether of the same material or a different material from the main body of the packaging unit, which is distinct from the main body of the packaging unit, which must be completely and permanently separated from the main body of the packaging unit, and which is typically disposed of before and separately from the main body of the packaging unit, including packaging components that can be separated from each other simply by mechanical action during transport or sorting.

Recycled plastic (PCR): recycled plastic means plastic that has been post-consumer plastic waste before recycling

Categorizing your packaging according to data collection

Why is it relevant to know how your packaging is categorized according to your data?

Because it is crucial that you obtain your data correctly in relation to how it should be eco modulated - and why is that so?

...you will need to know the composition in order to be able to know what parts should be eco modulated together or seperate. **5 things that are crucial considering:**

1 When you collect your data, it is crucial that you ensure that your data gives you knowledge about the composition of your packaging from the start.

2 You need to know whether your packaging consists of one packaging unit or it consists of multiple components and whether these are separate or integrated components.

3 Whether they are separate or integrated must be assessed in relation to the main component of your packaging unit.

4 A component that is separate can only be categorized as separate when this can be documented. Documentation can be done with or without test requirements.

5 Therefore, if you do not have the necessary documentation, you should always assess components as integrated components.

COMPONENTS AND DOCUMENTATION

Examples from the Danish Environmental Protection Agency for how a packaging unit is assessed according to the components of a packaging unit.

Briefly about documentation of separate components

A component is not to be considered separate until it can be documented.

Documentation without test requirements

- **Documentation without test requirements:**
  - the separation of the component is so clear that it is separable and thus a separate component
  - the subcomponent must be completely removable before the packaged product can be used
  - the subcomponent must not be reattachable

- **Documentation must include:**
  - a prose description
  - possibly a photo showing how the component is loose or deformed and therefore cannot be put back on

Documentation with test requirements

- **Documentation with test requirements:**
  - components that are not guaranteed to be separated by either the consumer, during transport or during sorting require testing

- **The documentation must contain descriptions of:**
  - test protocol
  - test facility, as well as justification for it being representative in DK
  - information for identification of packaging and all components
  - sample
  - result of the test

For more information about documentation requirements, see templates for obtaining documentation.

DATA POINTS FOR FLEXIBLE PLASTICS

Worth knowing about the flexible plastic category

Includes packaging with a dominant plastic content, made of flexible foils, laminates, multi-layer material and flexible plastic.

Flexible plastics can be made from a single type of plastic or composed of many different materials, for example PE (polyethylene), PP (polypropylene), PET (polyethylene terephthalate), PA (nylon), fiber-based materials and aluminum, etc. Flexible plastics can be recognized by having a 2D format or by the component changing shape after filling. Flexible plastics are, for example, bags, foil, shrink wrap, sleeves, tape, labels, etc.

Flexible plastic	
Main component	**Material type:**_____ **Weight:**_____ (g) **Weight percentage between PP and PE:**_____ (g/pct) **Density:**_____ (g/cm3) **Biodegradable plastic:** YES_____ NO_____ **Color:** No added color_____ Added color without carbon black_____ Added color containing carbon black or not NIR-sortable:_____ **Barriers:** None_____ Type_____ Weight percent of the entire main component:_____(g/pct) **By metallization:**_____ (μm) **For adhesives for multilayer materials:** Weight percentage of total weight of main component:_____(g/pct)
Main component and integrated component	**Printing ink for labels and foil decoration:** No printing_____ Complies with the current EuPIA list of printing inks: YES_____ NO_____ **Recycled content from PCR plastic:** Percentage by weight of recycled plastic of total weight of packaging:_____ (g/pct).

DATA POINTS FOR RIGID PLASTICS

Worth knowing about the rigid plastic category

Includes packaging made from all types of rigid plastic, for example PE (polyethylene), PP (polypropylene), PS (polystyrene) etc. However, excluding hard PET (polyethylene terephthalate). Rigid plastic can be made from a single type of plastic or composed of different types of materials.

Ridig plastic can be recognized by having a 3D format and that the component does not change shape after filling. Rigid plastic is, for example, bottles, trays, lids, tubes, etc.

Rigid plastic	
Main component	**Material type:**_____ **Weight:**_____ (g) **Weight percentage of PP and/or PE:**_____ (g/pct) **Density of PP or PE:**_____ (g/cm3) **Biodegradable plastic:** YES_____ NO_____ **Color:** No added color_____ Added color without carbon black_____ Added color containing carbon black or not NIR-sortable:_____ **Barriers:** None_____ Type_____ **Compatible binder_____ Incompatible binder_____** Weight percentage of binder of the entire main component:_____(g/pct)
Integrated component (all)	**Material type:**_____ **Weight:**_____ **(g)** **Density:**_____ **(g/cm3)** **Metallization: YES_____ NO____** **Biodegradable plastic: YES_____ NO_____**
Main component and integrated component	**Recycled content from PCR plastic:** Percentage by weight of recycled plastic of total weight of packaging:_____ (g/pct).

DATA POINTS FOR RIGID PET

Worth knowing about the rigid PET category

Includes packaging made of hard PET (polyethylene terephthalate), as opposed to flexible PET, which falls under the material category flexible plastic. For rigid PET, the dominant material is rigid PET, but the packaging can be composed of different materials.

Rigid plastic can be recognized by having a 3D format and that the component does not change shape after filling. Rigid PET is for example bottles, trays, lids, tubes, etc.

Rigid PET	
Main component	**Material type:**_____ **Weight:**_____ (g) **Weight percentage of PET:**_____ (g/pct) **Biodegradable plastic:** YES_____ NO_____ **Additives:** None_____ Type_____ **Color:** No added color_____ Added color without carbon black_____ Added color containing carbon black or not NIR-sortable:_____ Metallic color_____ **Barriers:** None_____ Type_____
Integrated component (all)	**Material type:**_____ **Weight:**_____ (g) **Density:**_____ (g/cm3) **Biodegradable plastic:** YES_____ NO_____
Main component and integrated component	**Recycled content from PCR plastic:** Percentage by weight of recycled plastic of total weight of packaging:_____ (g/pct).

DATA POINTS FOR FOAM PLASTIC

Worth knowing about the foam plastic category

Includes packaging made of all types of foam plastic, for example for transport protection or insulation, for example EPS (expanded polystyrene), XPS (extruded polystyrene), EPP (expanded polypropylene), PUR (polyurethane) and similar materials.

For foam plastic, the dominant material is foam plastic, but the packaging can be composed of different materials.

Foam plastic	
Main component	**Material type:**_____ **Weight:**_____ (g) **Evt. coating:** Material:_____ Weight percentage of main material:_____ (g/pct) **Biodegradable plastic:** YES_____ NO_____ **Additives:** None_____ Type_____ **Color:** No added color_____ Added graphite_____ White, gray or black_____ Color_____ **Printing ink:** None_____ Complies with current EuPIA list of printing inks: YES_____ NO_____ Coverage (percentage of outer surface coverage) _____ (percentage)
Integrated component (all)	**Material type:**_____ **Weight:**_____ (g)
Main component and integrated component	**Recycled content from PCR plastic:** Percentage by weight of recycled plastic of total weight of packaging:_____ (g/pct).

DATA POINTS FOR FOOD & BEVERAGE CARTONS

Worth knowing about the food and beverage cartons category

Includes food and beverage cartons that have contained food, for example milk cartons, juice cartons and cartons for, for example, peeled tomatoes or similar. It includes closed packaging that is not commonly used as service packaging.

The design criteria for food and beverage cartons are based only on the polymer part and not the fiber-based part.

Food and beverage cartons	
Main component and integrated component	**Printing ink:** None:_____ Contains printing inks listed on the EuPIA list: YES_____ NO_____ **Laminates and barrier films:** Material type_____ Weight percentage_____ (pct.) Contains biodegradable plastic: YES_____ NO_____ **Closure or lid:** None_____ Material type_____ Contains biodegradable plastic: YES_____ NO_____

DATA POINTS FOR CARDBOARD AND PAPER

Worth knowing about the cardboard category

Includes fiber-based packaging that is often not flexible, for example cardboard, corrugated cardboard and similar materials, which are manufactured in a cardboard production process.

Cartonboard typically has a weight between 180 grams/m2 to 400 grams/m2, while paperboard typically has a weight from 400 grams/m2 and upwards.
Also includes service packaging, such as paper cups and salad bowls, if the dominant material is paperboard.

Worth knowing about the paper category

Includes fiber-based packaging that is flexible, for example paper bags, sandwich paper, muffin tins and the like, which are manufactured in a paper production process. In some contexts, paper is also used in connection with non-flexible packaging.

 Paper typically has a weight between 17 grams/m2 to 180 grams/m2.

Cardboard and paper	
Main component and integrated component	**Material type:**_____ **Weight:**_____ (g) **Weight percentage of fiber material (excluding tape):**_____ (g/pct) **Addition of PFAS or mineral oils saturated with hydrocarbons (MOSH) or with aromatic hydrocarbons (MOAH):** YES_____ NO_____ **Hardly soluble additives:** YES_____ NO_____
Coating	**Surface treated with wax or paraffin:** YES_____ NO_____

DATA POINTS FOR GLASS

Worth knowing about the glass category

Includes glass packaging.

Glass	
Main component	**Material type:**_____ **Weight:**_____ (g) **Color:** **Metallization:** YES_____ NO_____ **Light transmittance** _____ **(pct.) at wave length_____ nm at the darkest point** **Color that is NIR-sortable:** YES_____ NO_____ **Glue:** None_____ Water washable: YES_____ NO_____
Integrated component (labels)	**Label/sleeve el.lign.:** No_____ With sleeve attached: **Material type:**_____ **Percent coverage of outer surface:**_____ (percent) **Sleeve is crimped so that the foil goes under the bottom of the bottle:** YES_____ NO_____ With label attached: **Material type:**_____ **Pct. coverage of outer surface:**_____ (pct.)

DATA POINTS FOR METAL AND ALUMINUM

Worth knowing about the ferrous metals category

Includes metal packaging that has a dominant content of steel and other ferrous materials, for example cans, drums, buckets and the like.

Worth knowing about the aluminum category

Includes aluminum packaging that has a dominant aluminum content, for example cans, foils, trays and the like.

Ferrous metals	
Main component and integrated component	**Material type:_____** **Weight percentage of ferrous metals, of the total weight:_____** (g) **Contains aluminum or aluminum alloy:** YES_____ NO_____

Aluminium	
Hovedkomponent	Aerosol container (packaging type): YES_____ NO_____
Main component and integrated component	**Material type:_____** **Weight percentage of aluminum, of the total weight:_____** (g) **Contains ferrous metals or alloy of ferrous metals:** YES_____ NO_____