



Guideline Recycled Material

Forum Rezyklat

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1 Introduction

This Guideline Recycled Material is intended to provide the basis for master data maintenance of the quantity and % content of recycled material (= recycled material content) in product packaging or product packaging materials in the GDSN data pool. This guideline should enable you to enter the packaging master data with regards to recycled material correctly by providing definitions and a multitude of examples in chapter 3. Only the content of “post-consumer recycled material” (PCR) used should be considered.

Among other things, master data maintenance should facilitate the objective of highlighting packaging with a high recycled material content in order to

- show customers the recycled material content in addition to the communication on the packaging (e.g.: at the POS or in the online shop by a separate label),
- influence people’s awareness and sensitise them to a responsible use of resources.

Information on the recycled material content has nothing to do with information on recyclability and its assessment in the context of this guideline.

The use and distribution of this guideline is permitted and desired without any restriction.

You can find additional information on content, legal & technical hints under the following links:

- <https://www.verpackungsregister.org/stiftung-behoerde/katalog-systembeteiligungspflicht?Katalog+Systembeteiligungspflicht>
- <https://www.gesetze-im-internet.de/verpackg>
- www.forum-rezyklat.de
- You can obtain further information on the general entry of master data directly from atrify at the following e-mail address: Support@atrify.com.
- You can obtain further information on data maintenance in line with licensing requirements from your licensing German Dual System.

2 Definitions and explanations

Definitions according to **ISO 14021:2016**

Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

	pre-consumer material	post-consumer recycled material (PCR)
Definition	Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.	Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain. ➔ The important thing is that the material has already had a use phase.
Examples	Punching waste from folding box production Round blank grids from the production of aluminium cans (aerosol cans) Plastic label waste skeletons Waste from bottle production (flashes, sprue)	Logistics material that has had a use phase (e. g. pallet stretch film) Packaging from the Recycling bag / Recycling bin Recyclable materials from the deposit collection Wastepaper from the collection centre Glass from the collection centre Label backing material
Relevance for recycled material label	None	Yes PCR label

Basic note on the definition of recycled material: recycled material includes all packaging materials, i. e. plastic, Paper, Cartonboard, Cardboard, aluminium / tinplate, glass and others. The term recycled material is also stored accordingly in the GDSN. This results in the following explanations for packaging materials:

1. Plastic

Instead of PCR, the rate of recycled material specified in accordance with ISO 14021 is used for the calculation.

2. Paper, Cartonboard, Cardboard

PCR material is paper-based material that has already had a use phase.

3. Aluminium / ferrous metals

PCR material is aluminium / ferrous metals that have already had a use phase.

Broad fluctuations represent reality. Please enter the data as accurate as possible and to the best of your knowledge.

4. Glass

PCR material is glass that has already had a use phase.

Broad fluctuations represent reality. Please enter the data as accurate as possible and to the best of your knowledge.

General information:

1. The recycled material content must always be entered as the mass / proportional weight of the packaging. The volume fraction is not relevant.

$$\text{Recycled content} = \frac{\text{Mass of PCR contained in the packaging material}}{\text{Total mass of the packaging material}} * 100\%$$

2. The **plastic additives**, e. g. colour masterbatches, cannot be added to the recycled material content, please see also EuCertPlast standardization.

E. g. if a bottle is coloured with 3 % colour masterbatch, and the colour is batched on Virgin material, this is not allowed to be added to the PCR content. Only PCR content is allowed, also see EuCertPlast Standardisation for the calculation.

3. In case of fluctuations of the recycled content, you need to enter **the minimum content of recycled material**. The average or maximum value is not applicable!
4. The option "**Plastic Other**" should only be selected if a more precise classification is not possible.

3 Which components of the packaging must be considered with examples

Important for private label manufacturers: the data you enter can also be used for packaging licensing. Please consider the manual separability of the packaging and the 95/5 rule in accordance with the German Packaging Law.

It is important to identify all the individual components used for the packaging.

The following section describes each single step from a. to e., illustrating what needs attention and how you should proceed in order to correctly identify the packaging material (you can also find the single steps from a. to e. in the following examples):

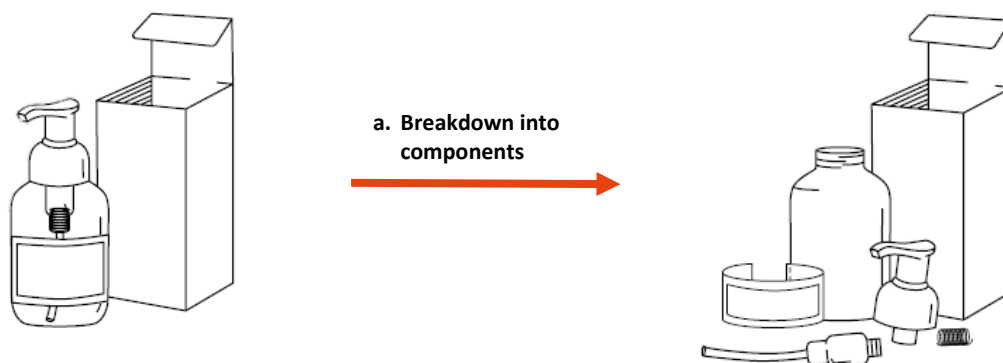
- a. Break down the packaging into its individual components.
- b. Identify the packaging materials of the individual components.
- c. Determine the weight of packaging material of the individual components, **even if no recycled material was used.**
- d. Determine the recycled material content for each component.
- e. Now observe the manual separability of the individual components for the end user and the 95/5 rule in order to make the information usable for packaging licensing. If in doubt, consult with your licensing partner.

The master data maintenance of sales packaging is explained based on the following examples:

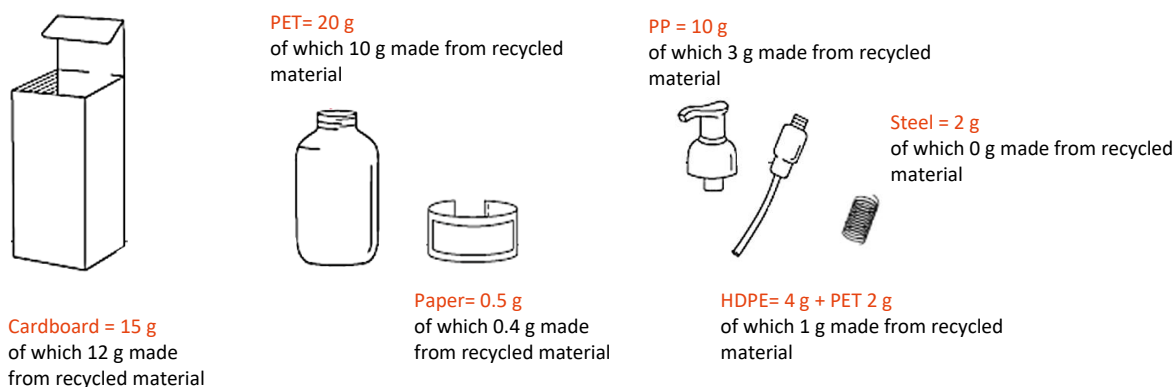
- 3.1 Dispenser with folding box
- 3.2 Bottle / tube
- 3.3 Aerosol can
- 3.4 Glass jar with folding box
- 3.5 PET / PP film (e. g. pasta packaging)
- 3.6 Paper / plastic composite (e. g. fruit squeeze pouch for children)

3.1 Dispenser with folding box

This packaging consists of a folding box and a bottle with a pump dispenser.



b. c. d. Packaging materials incl. recycled material content



e. Folding box, bottle and pump dispenser can be separated manually.

- The **folding box** is a package in its own right and forms a packaging level.

Data entry according to GDSN target market profile:

Packaging material: Cardboard

Quantity of packaging material: 15 g

Recycled material content of packaging material [%]: $\frac{12g}{15g} * 100 \% = 80 \%$

- The **bottle** along with the pump dispenser constitutes another packaging level.

According to the 95/5 rule, the bottle must be considered as one unit together with the label, as they cannot be separated manually. The bottle weighs 20 g, while the paper label weighs only 0.5 g. According to the 95/5 rule, the calculation is now as follows:

The paper content for the labelling as PET mono-material must be less than 5% of the total weight.

$0.5 \text{ g} / 20.5 \text{ g} = 0.024 = 2.4\%$

The weight of the bottle and the paper label are added up and entered as PET. The paper label's recycled material content must also be considered in the recycled material data.

Data entry according to GDSN target market profile:

Packaging material: Polyethylene terephthalate (PET)

Quantity of packaging material: 20.5 g

Recycled material content of packaging material [%]: $\frac{10.4 \text{ g (10g bottle + 0.4 g label)}}{20.5 \text{ g}} * 100 \% = 50.73 \%$

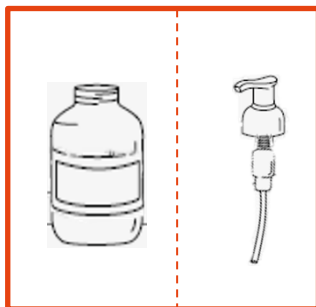
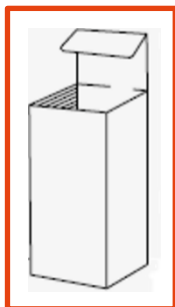
- The **pump dispenser** with integrated steel spring must also be considered separately, because in our case it can be separated from the bottle manually by means of a twist closure. The 95/5 rule must be checked in this case too: $2 \text{ g} / 18 \text{ g} = 0.11 = 11 \%$ iron content in the pump spray head. This means that the spring accounts for more than 5 % of the weight of the pump dispenser head. Therefore, no other material can exceed the 95 % threshold. It is considered as a composite material.

Data entry according to GDSN target market profile:

Packaging material: Mixture, composite

Quantity of packaging material: 18 g

Recycled material content of packaging material [%]: $\frac{4 \text{ g (3 g pump head + 1 g stand pipe)}}{18 \text{ g}} * 100 \% = 22.22 \%$



In this case you have a combination packaging. **2 packaging levels** must be entered. Bottle + pump dispenser as **packaging type** "bottle" on **packaging level 1** and the folding box as packaging type "folding box" on **packaging level 2**.

You need to specify the packaging materials of the folding box, the bottle and the pump dispenser according to the packaging type and the packaging level.

If the various separable parts result in a duplication of material categories within a packaging level according to the German Packaging Act (VerpackG), they should be combined and indicated together.

For the dispenser with folding box, the data in the GDSN looks as following, illustrated based on the publishing example for the data pool atrify:

- Verpackung / Logistik / Preis / ...
- Verpackung**
- Paletten
- Preis
- Saison / Bestellung
- Handhabung
- Regaloptimierung
- Publikation/ System- / Statusin...

Navigation Verpackungshierarchie

Attribute anzeigen

Verpackungsinformation

Verpackungsinformation — No.: 1 / 25

Verpackungsart: (80) - Flasche

Verpackungsart: Beschreibung: Deutsch (de)

Verpackungsebene: 1

Verpackungsmaterial — No.: 1 / 999

Verpackungsmaterial: Code: (POLYMER_PET) - Polyethylenterephthalat (PET)

Verpackungsmaterial: Menge — No.: 1 / 999

Verpackungsmaterial: Menge: 20,5 (GRM) - Gramm

Verpackungsmaterial: Rezyklatanteil [%]: 50,73

Verpackungsmaterial — No.: 2 / 999

Verpackungsmaterial: Code: (COMPOSITE) - Gemisch, Verbundstoff

Verpackungsmaterial: Menge — No.: 1 / 999

Verpackungsmaterial: Menge: 18 (GRM) - Gramm

Verpackungsmaterial: Rezyklatanteil [%]: 22,22

- Verpackung / Logistik / Preis / ...
- Verpackung**
- Paletten
- Preis
- Saison / Bestellung
- Handhabung
- Regaloptimierung
- Publikation/ System- / Statusin...

Navigation Verpackungshierarchie

Attribute anzeigen

Verpackungsinformation

Verpackungsinformation — No.: 2 / 25

Verpackungsart: (BRJ) - Faltschachtel

Verpackungsart: Beschreibung: Deutsch (de)

Verpackungsebene: 2

Verpackungsmaterial — No.: 1 / 999

Verpackungsmaterial: Code: (PAPER_PAPERBOARD) - Pappe

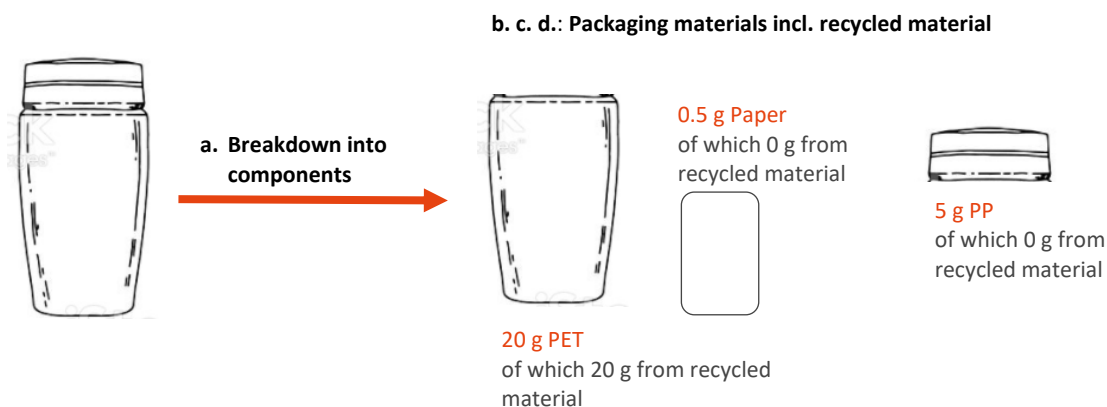
Verpackungsmaterial: Menge — No.: 1 / 999

Verpackungsmaterial: Menge: 15 (GRM) - Gramm

Verpackungsmaterial: Rezyklatanteil [%]: 80

3.2 Bottle / tube

This breakdown can be used for bottles or tubes; the explanation is based on a bottle consisting of a bottle + closure + label.



e. Case 1: Bottle and closure can be separated manually:

- The bottle must be considered as a unit together with the label, as they cannot be separated manually. The bottle accounts for 20 g, while the paper label weighs only 0.5 g. According to the 95/5 rule, the calculation is now as follows:
The paper content for the labelling as PET mono-material must be less than 5% of the total weight: $0.5 \text{ g} / 20.5 \text{ g} = 0.024 = 2.4 \%$.

Rather than indicating the quantity of paper separately, it is therefore included in the “quantity” together with the PET bottle.

Data entry according to GDSN target market profile:

Packaging material: Polyethylene terephthalate (PET)

Quantity of packaging material: 20.5 g

Recycled material content of packaging material [%]: $\frac{20 \text{ g}}{20.5 \text{ g}} * 100 \% = 97.56 \%$

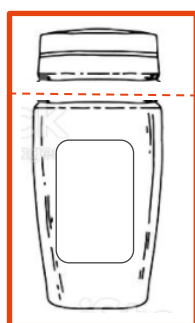
- If the 5 g **closure** can be separated manually, it must be entered separately:

Data entry according to the German GDSN target market profile:

Packaging material: Polypropylene (PP)

Quantity of packaging material: 5 g

Recycled material content of packaging material [%]: 0 %



The bottle and the closure are entered together as **packaging type “bottle” on packaging level 1**. You enter the weight of the bottle and the weight of the closure separately along with the respective packaging material type under “Bottle”.

e. Case 2: Bottle and closure can NOT be separated manually:

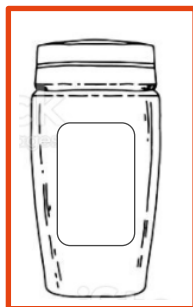
- The **bottle** must be considered as a unit together with the label and the closure, as they cannot be separated manually. According to the 95/5 rule, the paper content is the smallest ($0.5g/25.5g = 1.96\%$) and therefore the total quantity should be entered under plastic.

Data entry according to the German GDSN target market profile:

Packaging material: Plastic Other¹

Quantity of packaging material: 25.5 g

Recycled material content of packaging material [%]: $\frac{20g}{25.5g} * 100 \% = 78.43 \%$

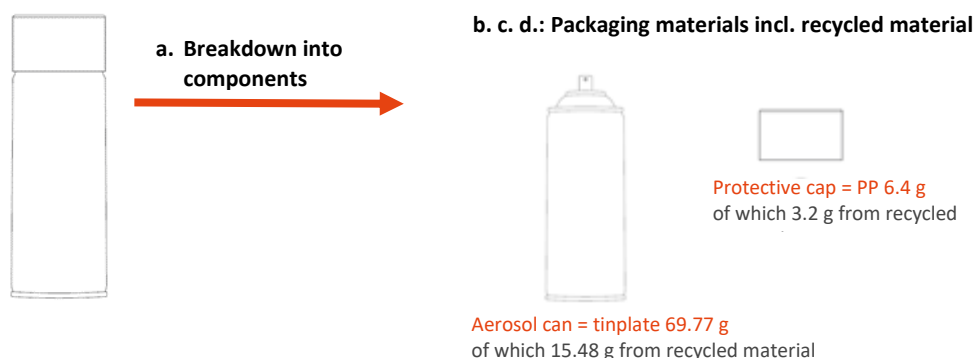


The bottle and the closure are entered together as **packaging type "bottle"** on **packaging level 1**. You enter the weight of the bottle and the weight of the closure added together as a packaging material type under "Bottle".

¹ The option "Plastic Other" should only be selected if a more precise classification is not possible.

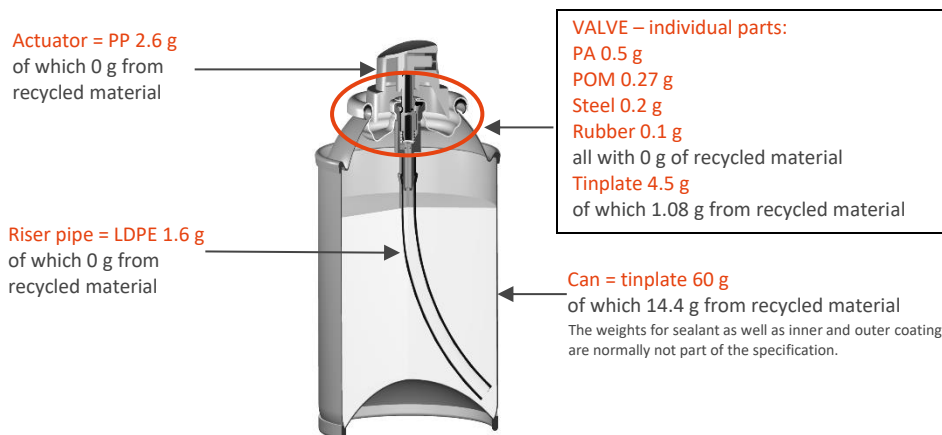
3.3 Spray can

The spray can consists of a protective cap and an aerosol can which can be separated manually and should therefore be considered separately.



It is not necessary to breakdown the aerosol can into its individual components if the total recycled material content is already stated in the aerosol can specification.

Otherwise, the following example diagram can help you calculate the data.



e. The can and the protective cap can be separated manually.

- The **protective cap** can be separated manually.

Data entry according to GDSN target market profile:

Packaging material: Polypropylene (PP)

Quantity of packaging material: 6.4 g

Recycled material content of packaging material [%]: $\frac{3.2 \text{ g}}{6.4 \text{ g}} * 100 \% = 50 \%$

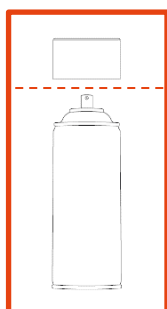
- The aerosol can should be regarded as one unit with all its components, as they cannot be separated manually. The aerosol can has a total weight of 69.77 g.
In this case the 95/5 rule must be checked as well: $\frac{64.50 \text{ g (4.5g+60g - tinplate)}}{69.77 \text{ (total weight) g}} = 0.92 = 92 \%$ tinplate content in the aerosol can.
This means that the non-tinplate fraction accounts for more than 5 % of the weight of the aerosol can. Therefore, no other material can exceed the 95 % threshold. It is considered as a composite material.

Data entry according to GDSN target market profile:

Packaging material: Mixture, composite

Quantity of packaging material: 69.77 g

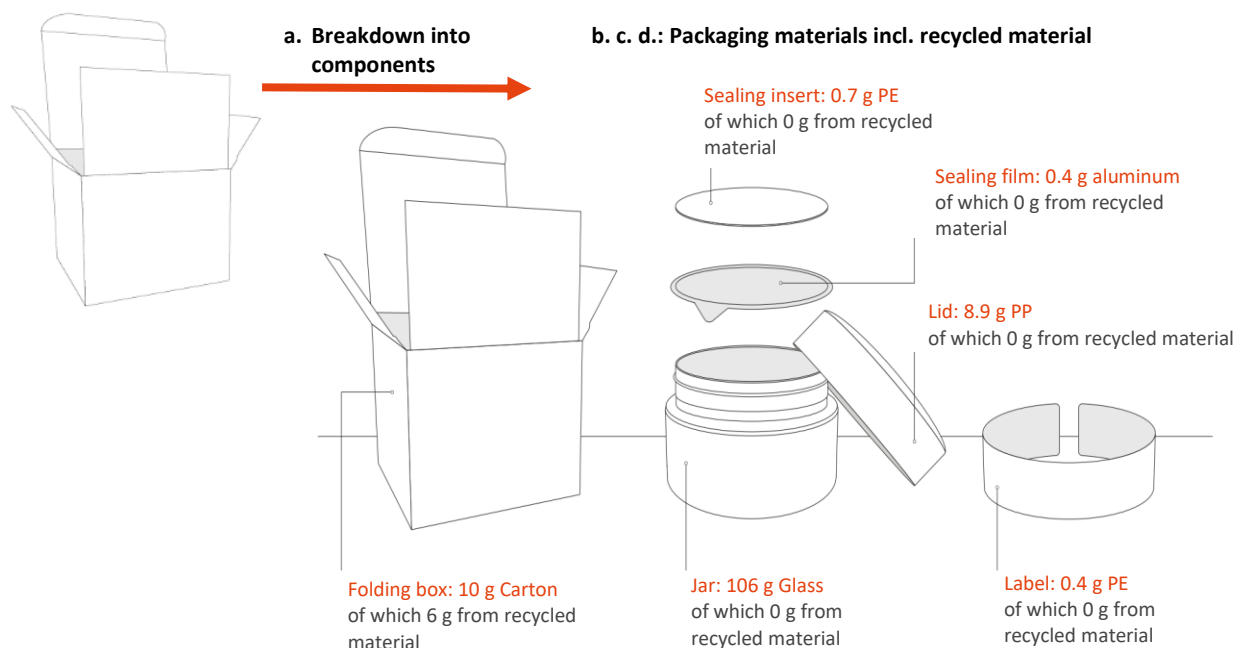
Recycled material content of packaging material [%]: $\frac{15.48 \text{ g (can with 14.4 g + valve with 1.08 g tinplate)}}{69.77 \text{ g}} * 100 \% = 22.19 \%$



The can and the protective cap are entered together as **packaging type** “spray can” on **packaging level 1**. Under “spray can” you enter the weight of the can added together as a packaging material type and weight of the protective cap separately.

3.4 Glass jar with folding box

The packaging consists of a folding box and a jar with a lid.



e. Folding box, jar and lid can be separated manually.

- The **folding box** is a package in its own right.

Data entry according to the German GDSN target market profile:

Packaging material: Cardboard

Quantity of packaging material: 10 g

Recycled material content of packaging material [%]: $\frac{6\text{ g}}{10\text{ g}} * 100\% = 60\%$

- The **jar** and the label should be regarded as one unit, as they cannot be separated manually. The jar weighs 106 g, while the plastic label weighs only 0.4 g.
According to the 95/5 rule, the calculation is now as follows:
The plastic content for the labelling as a glass mono-material must be less than 5% of the total weight.
 $0.4\text{ g} / 106.4\text{ g} = 0.0038 = 0.38\%$

Data entry according to the German GDSN target market profile:

Packaging material: Glass

Quantity of packaging material: 106.4 g

Recycled material content of packaging material [%]: 0 %

- The **lid** with integrated sealing insert must be reported separately, because it can be separated from the glass jar manually by means of a twist closure. The lid and the sealing insert are considered as one unit.

The 95/5 rule must be checked in this case too:

$$0.7\text{ g} / 9.6\text{ g} = 0.073 = 7.3\% \text{ PE}$$

Therefore, no other material can exceed the 95 % threshold. It is considered as a composite material.

Instead of reporting the PE quantity of the sealing insert separately, it is included in the "quantity" together with the lid as "mixture, composite".

Data entry according to the German GDSN target market profile:

Packaging material: Plastic, synthetic, other

Quantity of packaging material: 9.6 g

Recycled material content of packaging material [%]: 0 %

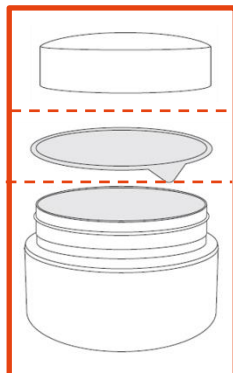
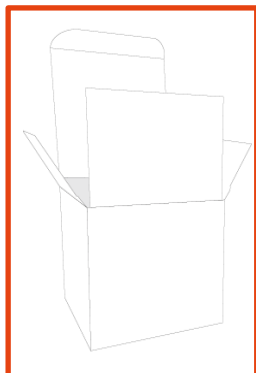
- The **sealing film** is also considered as a separate item, as it can be separated from the jar and it also not a component of the lid.

Data entry according to the German GDSN target market profile:

Packaging material: Aluminium

Quantity of packaging material: 0.4 g

Recycled material content of packaging material [%]: 0 %



In this case you have a combination package.
2 levels have to be reported.
 All weights of jar and the other components should be entered (as indicated above) as **packaging type "jar"** on **packaging level 1** and the folding box as **packaging type "folding box"** on **packaging level 2**.

3.5 PET / PP film (e. g. pasta packaging)

The plastic film consists of 2 types of plastic that are joined as a laminate.



a. Breakdown into components



b. c. d.: Packaging materials incl. recycled material

0.1 g PET
of which 0 g from recycled material

5 g PP
of which 0 g from recycled material

e. The components can NOT be separated manually.

- According to the 95/5 rule, the PET content is less than 5% of the total weight ($0.1 \text{ g} / 5 \text{ g} = 2 \%$). The total quantity is entered under the plastic PP.

Data entry according to the German GDSN target market profile:

Packaging material: polypropylene (PP)

Quantity of packaging material: 5.1 g

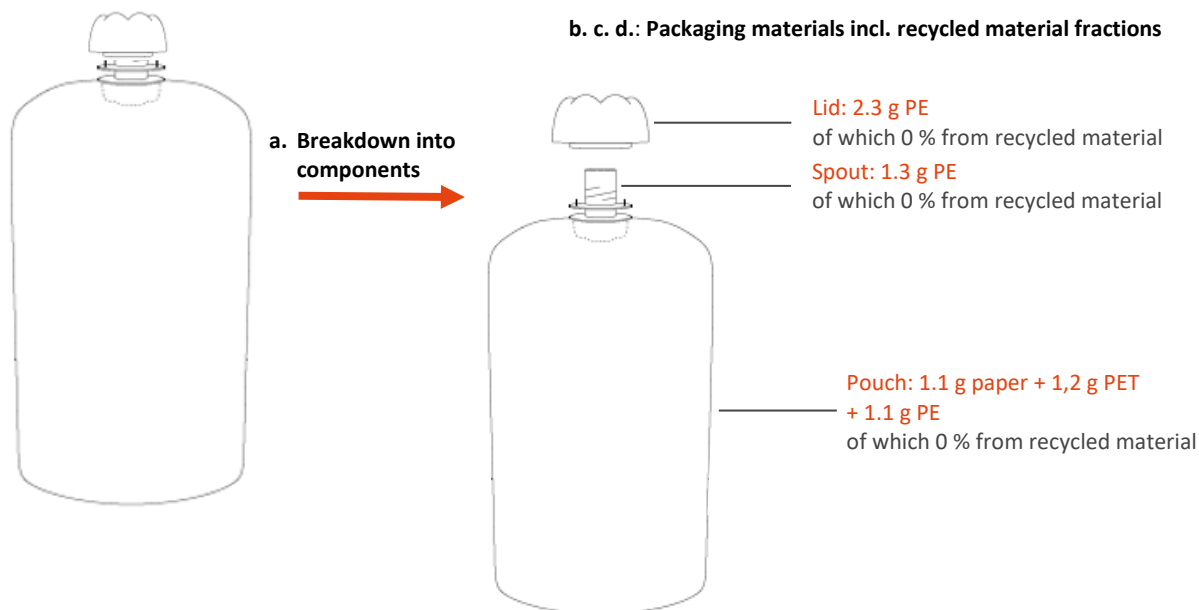
Recycled material content of packaging material [%]: 0 %



The plastic film is entered as **packaging type "bag"** on **packaging level 1**.

3.6 Paper / plastic composite (e. g. fruit squeeze pouch for children)

This packaging consists of a bag and a lid.



e. Lid and pouch can be separated manually:

- The pouch should be considered as a separate unit. As the materials cannot be separated manually and none of the materials has a content > 95 %, this is classified as “mixture, composite”.

Data entry according to the German GDSN target market profile:

Packaging material: Mixture, composite

Quantity of packaging material: 4.7 g

Recycled material content of packaging material [%]: 0 %

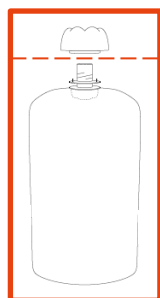
- The lid can be separated from the bag by a twist mechanism.

Data entry according to the German GDSN target market profile:

Packaging material: Polyethylene (PE)

Quantity of packaging material: 2.3 g

Recycled material content of packaging material [%]: 0 %



The pouch (bag) and the lid are entered together as **packaging type “bag”** on **packaging level 1**. You enter the weight of the bag and the weight of the lid.