



## Instructions for completing the Calculation sheet for the EU Ecolabel for laundry and cleaning agents (product groups: I&I laundry agent / I&I dishwasher detergent)

### 1. Sheet "Product"

- Select the language (English/German). **Please keep in mind: If you change the language after completing the form, the some of the ratings may no longer be correct.**
- Select the decision you applying for. Enter the date (state of the data) and possibly information about the version.
- Enter the holder (company name). The contract number is given by RAL gGmbH.
- Enter the label user (the distributor, i.e. the company that is on the label), (if different from the signatory) and the product name and the country / countries of the placing on the market. In the sheets "Packaging 1-4" / "5-8" you can enter 8 different packages. Enter the number of the package size (i.e., 1, 2, 5) for this product. In total, you can enter 15 different label users and/or product names and specify the respective package size.
- Select the product type.
- For multi-component systems, an Excel table must be filled in for each component. Enter the function of the component here.
- Enter the hazard statements of the product. If this is not allowed, the font colour changes to red.
- Select the product type.
- Specify the specific density for liquid products.
- Specify the pH value of the concentrate.
- Explain whether the product contains preservatives, fragrances, dyes, microorganisms, enzymes, palm / palm kernel oil or their derivatives.
- Select the unit for the reference dosing (according to the label/data sheet).
- Enter the reference dosages for the three different water hardness (as defined in the relevant decision). For detergents, additionally enter the dosages for lightly and heavily polluted with the 3 types of water hardness. If the product is not tested for water hardness, please do not enter anything. The reference dosing in g/unit is determined automatically and displayed.

### 2. Sheet "Formulation Pre-products"

- Enter the **full** formulation of the product, including the **exact** trade name (**the same as** the SDS and the declaration), the manufacturer or supplier, the function, the proportion (in%) in the recipe.
- Compliment whether the application has been accompanied by an SDS and a declaration by the manufacturer/supplier. Add the hazard statements of the product (Chapter 2 of the SDS)
- The sum must be 100 (%).
- Please do not leave blank rows.
- Alternative products can be listed directly among each other, then specify the proportion in the recipe only for one product! At the bottom, you can make comments.
- Then shorten the table (filter Trade name, remove checkmark at "Empty").

### 3. Sheet "Ingoing Substances"

- Starting with the first raw material, specify the ingredient(s) that are contained. The decision specifies which limits of quantification are required. Undertake the designation according to IUPAC (or as indicated in the SDS of the raw material).
- Select the raw material which contains the ingredient, the active ingredient (in %), the CAS number, and, **very importantly**, choose the function. The weight of the ingredient in the recipe is determined automatically from the data. If it exceeds 0.01%, the background colour changes.
- If necessary, enter the hazard statements of the ingredient (Chapter 3 of the SDS of the raw material or, where appropriate, other sources).
- If a hazard statement (the three-digit number) is recognized which is restricted, the font colour changes to red (all hazard statements). Where a derogation exists or the concentration is below the limit of determination (as defined in the decision), they shall be selected accordingly.
- Select "BCF" or "log Kow" for **biocides** and enter the appropriate value. (If bioaccumulating the font colour changes to red). In the application (or in the Remarks field), specify where the value originates or add the relevant document to the application.
- Select "BCF" or "log Kow" or "approved for foodstuff" for **colouring agents** and enter the appropriate value for BCF or log Kow. (If bioaccumulating the font colour changes to red). In the application (or in



the Remarks field), specify where the value comes from or attach the corresponding document to the application.

- Select the type of the product.
- Choose, **very importantly**, whether it is an organic substance (Y) or not (N), otherwise the calculation is not possible.
- Choose, **very importantly**, whether palm/palm kernel oil (Y) is included or not (N), otherwise the calculation is not possible.
- If phosphorus is included in the ingredient, **very importantly**, always indicate the percentage. (Tip: For this purpose, there is on the Internet a molecular weight calculator, for example <http://www.chemie.de/tools/>, with which the calculation is very simple by entering the sum formula).
- The sum of all ingredients (including water) must be 100 (%) again.
- Then shorten the table (filter Ingredient, remove checkmark at "Empty").
- **Specific case:** There may be a chemical reaction between (usually two) raw materials. This means that the raw material does **not** contain the ingredient, but it forms itself first.

The example "Fatty acid and alkali to a soap" explains how to proceed in this case:

a) Entry in the sheet "Formulation Pre-products"

cons. no:	Trade name	Manufacturer/retailer	Function (please select or fill-in)	weight in the formulation in mass-% (=g/100g product)
1	water			78,14987
2	Triethanolamin	Manufacturer A	Other	1,0
3	Fatty acid	Manufacturer B	Other	0,5

b) Entry in the sheet „Ingoing Substances“

cons. no:	Ingoing substance 3) Name (IUPAC)	contained in primary product (please choose)	active content in the pre-product (in %)	CAS- no:	Function (please select)	weight in the formulation in mass-% (=g/100g product)
1	water	-	-	-	-	86,71488
2	Triethanolamin	Triethanolamin	70,0	102-71-6	Other	0,7
3	Reaction product of Fatty acid and TEA	Fatty acid	160,0		Surfactant	0,8

In order to correctly display the weight of the ingredient in the recipe, values of up to 200 (%) for the active content can be entered.

#### 4. Sheet "Ingoing substances\_DID"

- From the DID list version 2016 part A, select the DID number associated with the ingredient.
- The DID numbers 2410 (CIT / MIT), 2411 (MIT) and 2401 (BIT) are displayed in red, as there are concentrations restrictions for these preservatives. Further, the DID numbers 2510 (GLDA) and 2608 (MGDA) are displayed, since there are restrictions on the NTA contamination. Also, the DID numbers 2504 (phosphates), 2565 (phosphoric acid) and 2512 (phosphonates) are displayed in which a P-value has to be entered in the sheet "Ingoing Substances".
- If the ingredient is not listed, select "not included". In this case, according to the specifications in the DID list part B, a DF-value must be selected and a TF-value entered. If not, the calculation of the CDV cannot be performed. Select further details for aerobic and anaerobic bio-degradability. In the application (or in the Comments field), indicate where the information comes from, or provide information on the calculation of the TF-value, and attach the corresponding documents to the application.



- For organic substances which are not surfactants and whose anaerobic bio-degradability has not been determined ("O"), you can choose whether you wish to claim an exception in accordance with the specifications of the decision. In this case, select a 1, 2 or 3 according to the specifications of the product, and attach corresponding documents to the application.
- Then shorten the table (filter Ingredient, remove checkmark at "Empty").

#### 5. Sheet "Results-1a-medium soiling"

- Shorten the table (filter Ingredient, remove check mark at "Empty").
- According to the previous data, the following is evaluated for machine dishwasher detergents and laundry detergents for medium soiling: aerobic bio-degradability of surfactants/anaerobic bio-degradability of surfactants (classified with H400 or H412) / CDV / aerobic bio-degradability of organic ingredients / P-content for each of the three different water hardness. The multi-component systems are evaluated in a separate sheet.

#### Sheet "Results-1b-light soiling (LD)"

- Shorten the table (filter Ingredient, remove checkmark at "Empty").
- According to the previous inputs, the following is assessed for laundry detergents for light soiling: aerobic bio-degradability of surfactants/anaerobic bio-degradability of surfactants (classified with H400 or H412) / CDV / aerobic bio-degradability of organic ingredients / P-content for each of the three different types of water hardness. The multi-component systems are evaluated in a separate sheet.

#### Sheet "Results-1c-heavy soiling (LD)"

- Shorten the table (filter Ingredient, remove checkmark at "Empty").
- According to the previous inputs, the following is assessed for laundry detergents for heavy soiling: aerobic bio-degradability of surfactants/anaerobic bio-degradability of surfactants (classified with H400 or H412) / CDV / aerobic bio-degradability of organic ingredients / P-content for each of the three different water hardness. The multi-component systems are evaluated in a separate sheet.

#### 6. Sheet "Results-1 multicomponent system"

In the case of multi-component systems, enter the results of all the individual components in **one** Excel table of **one** product, which are then evaluated in total in this sheet.

- Select the product type.
- Enter the trade names of the individual components in the upper table, as well as the results for CDV / aerobic bio-degradability of the organic ingredients / anaerobic bio-degradability of the organic ingredients / P-content for the three different water hardness. For detergents, the results for **medium** soiling.
- For **laundry detergents**, additionally add the corresponding results for light and heavy soiling in the middle and bottom tables.

#### 7. Sheet "Results-2"

- Shorten the table (filter Ingredient, remove checkmark at "Empty").
- Only ingredients containing palm/palm kernel oil are listed. Choose the proof for these substances. If "Book&Claim", enter the percentage (in%) of palm/palm kernel oil in the substance of ingredient.
- According to the quantity of production, the necessary certification quantity (in tonnes) for "Book & Claim" is displayed, or the quantity of raw material (in tonnes) to be proved for segregated or mass-balance inputs.

#### 8. "Packaging sizes 1-4" and "Packaging sizes 5-8"

- You can submit a total of 8 different packages on these sheets. (If this is not enough, please copy one sheet).
- Start with package size 1, then 2, etc.
- Briefly describe the packaging (e.g. 750ml canister)
- Enter the volume or weight of the product in the primary packaging **according to the unit of the reference dosing** (in the yellow field, the unit of the reference dosing is, therefore, displayed again).



- Name the different parts of the primary packaging and indicate their weight, then the new material contained in it. For the re-use number, enter either a 1 or 2 according to the specifications in the resolution.
- The result is evaluated for the three different water hardness (counts as ok if the WUR is below the limit or if the recycled material of the primary package is greater than 80%).
- Select the materials for the container/bottle, the label/cuff, the closure and the barrier coating. If **not** applicable, specify the appropriate material.