FAQ ON THE RECYCLABILITY CALCULATOR

27/09/2023

VERSION 1.0

WWW.ECOLOGIC-FRANCE.COM

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1 Producers and products subject to the information obligation

1.1 WHO IS AFFECTED BY THIS OBLIGATION TO PROVIDE INFORMATION?

As explained in the FAQ published by the Ministry for Ecology (https://www.ecologie.gouv.fr/encadrement-des-allegations-environnementales-et-information-duconsommateur-sur-produits), the obligation to inform consumers about certain environmental qualities and characteristics of their products, as defined in article 13 of the AGEC law, concerns producers, importers or other marketers of products.

The producer is defined as "any natural or legal person who manufactures the product or has the product designed or manufactured and markets it under their own name or brand". The importer is defined as "any natural or legal person who places a product from a third country on the French market".

As a rule, in the event of a difference, the information provided in the FAQ published by the Ministry of Ecology takes precedence over the answers provided in this FAQ or any other source of information.

1.2 HOW SHOULD TURNOVER BE CALCULATED TO DETERMINE THE APPLICATION OF THIS INFORMATION OBLIGATION?

As specified in the FAQ published by the Ministry of Ecology (https://www.ecologie.gouv.fr/encadrement-des-allegations-environnementales-et-information-duconsommateur-sur-produits), the turnover to be taken into account to check whether the company is concerned corresponds to the annual turnover[1] achieved cumulatively for all the products mentioned in article R. 541-221 of the Environment Code placed on the French market (cumulatively for the various EPR[2] channels) during the last full accounting period[3].

1.3 WHICH PRODUCTS ARE CONCERNED?

All products subject to declaration under the SLA EPR scheme are included in the calculation of recyclability, regardless of the number of units marketed under this specific reference.

1.4 HOW CAN WE ASSESS THE RECYCLABILITY OF PRODUCTS COLLECTED VIA INDIVIDUAL CHANNELS?

The technical note does not apply to products managed through individual systems that do not belong to an eco-organization. Individual systems should not be confused with the specific collection/recycling channels mentioned in question 1.5~~1.4~~.) As stated in the FAQ published by the Ministry for Ecology (https://www.ecologie.gouv.fr/encadrement-des-allegations-environnementales-et-information-

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[1] Annual turnover is calculated excluding value-added tax (VAT) and other indirect duties or taxes" (article 2 of decree no. 2008-1354).

[2] EPR: Extended Producer Responsibility scheme (filière à Responsabilité Elargie du Producteur in French). The fundamental principle of EPR is that producers must finance and/or organise the collection and treatment of waste from the products they place on the market.

[3] If the 2022 accounting period is completed on 03/31/2023, then the calculation made on 01/01/2023 should relate to the 2021 accounting period.

duconsommateur-sur-produits), producers who have set up individual systems are responsible for providing this information.

1.5 HOW DO I EVALUATE A PRODUCT FOR WHICH A SPECIFIC COLLECTION/RECYCLING CHANNEL HAS BEEN SET UP BY MY COMPANY?

Individual recycling solutions put in place by producers may be considered under certain conditions guaranteeing verification of the five characteristics defined in Decree no. 2022-748.

These conditions will be detailed in a process to be defined by Ecologic from Q4 2023, once the general case has been tested. Pending this possibility, please continue to model your product using the "standard" tool provided by Ecologic in order to obtain a recyclability rate.

1.6 IS THE INFORMATION ON THE RECYCLABILITY OF PRODUCTS DECLARATORY OR DOES IT HAVE TO BE VERIFIED BY A THIRD PARTY?

The data is declarative and does not necessarily have to be verified by a third party before publication. Nevertheless, the veracity of this information is the responsibility of the marketer. Penalties may therefore be imposed if the obligation to provide information is not complied with, or if the information provided is incorrect because the calculation methodology proposed by the eco-organizations has not been respected.

As the FAQ published by the Ministry for Ecology points out (https://www.ecologie.gouv.fr/encadrement-des-allegations-environnementales-et-information-duconsommateur-sur-produits), "Article L. 541-9-4-1 of the Environmental Code provides for a system of checks and penalties in the event of non-compliance with the obligations defined in article L. 541-9-1 of the Environmental Code. [...] Under article L. 511-7 of the Consumer Code, DGCCRF inspectors will be empowered to investigate and record infringements or breaches of these provisions from 1 January 2023.

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In addition, "as with any other commercial practice, the system of penalties for misleading commercial practices set out in article L. 132-2 of the French Consumer Code is applicable".

1.7 HOW DO YOU ACCOUNT FOR ACCESSORIES?

Accessories must be assessed by applying the rules and recyclability rates of the category to which the equipment with which they are associated belongs. However, if an accessory is sold separately, it must be calculated separately.

The FAQ published by the public authorities' states (as at 15/06/2023): "the obligation does not apply to each component of a product, but to the product as a whole. Only information relating to recyclability - since it depends on the information provided by each eco-organization - may be given for each component covered by an EPR channel".

1.8 SHOULD PACKAGING BE INCLUDED IN THE ASSESSMENT?

Packaging itself is a "waste-generating product" within the meaning of the French Environment Code and Decree no. 2022-748.

Their recyclability must therefore be assessed and communicated separately, based on the information provided by the approved EPR eco-organizations for packaging.

2 Regulatory criteria and information

2.1 QUELLE EST LA DIFFERENCE ENTRE CONTENU RECYCLE, TAUX DE RECYCLAGE ET RECYCLABILITE

The recycled content (often a %) represents the proportion of recycled material(s) in the product. For example, a plastic sled could include a proportion of recycled plastic in the plastic making up the shell. The concept of recycled content therefore focuses on the manufacturing part of the product from a life-cycle perspective. Note, however, that a product containing recycled content is not necessarily recyclable, as the end-of-life management system is not always capable of identifying and sorting this material for a new recycling cycle (see 4.5).

The recycling rate (%) corresponds to the capacity of a sector to recycle the materials in a product. It is a mass-based view that takes into account the difference between the quantity of materials entering the process and the quantity of recycled materials leaving the process. The recycling rate can therefore only be calculated for existing products that are actually processed by the recycling network. The recycling rate focuses on the end of the product's life.

Recyclability (% or an indication) is a theoretical vision corresponding to the capacity of a sector to recycle an existing or non-existing product which has not actually passed through the recycling sector. Recyclability provides a potential capacity to be recycled. In the context of SLAs, decree no. 2022-748 sets out the criteria that must be met for a product to be considered recyclable, and the calculator provided by Ecologic enables you to make this calculation.

2.2 HOW CAN WE ASSESS THE RECYCLABILITY OF PRODUCTS THAT WILL ONLY REACH THE END OF THEIR LIFE IN SEVERAL YEARS OR EVEN DECADES?

Decree no. 2022-748 does not provide any specific rules or exemptions depending on the lifespan of the equipment, but it does require an assessment of the product's capacity to be recycled on an industrial scale and in practice, and a check to be made to see whether the recycling sector can demonstrate a good capacity to handle products that can be integrated into it (criterion no. 5 of the decree). The processes used to assess the recyclability of SLA materials therefore reflect the best techniques currently available in the French SLA sector.

2.3 CAN THE RECYCLABILITY OF A PRODUCT ASSESSED USING THE CALCULATION METHODOLOGY PROVIDED BY ECOLOGIC BE LOWER THAN THE RECYCLING RATES COMMUNICATED BY ECOLOGIC?

The sector is still in its infancy, and the treatment flows to which end-of-life products are directed could evolve in the years to come. In all cases, the treatment processes used in the SLA sector operate on heterogeneous mixtures of end-of-life products and materials. Within each SLA flow, the various types of products treated achieve different levels of recycling depending on their composition: the recycling rate reported by Ecologic is an average that may mask a certain amount of dispersion between products.

Furthermore, the products placed on the market and covered by this consumer information do not have the same composition as those currently collected and processed by the SLA channel (see question 2.1). Recycling rates measured on flows of products currently at the end of their life cannot therefore be taken directly as proof of recyclability for new products belonging to the same categories.

2.4 IS IT POSSIBLE TO SHARE THE CALCULATION TOOL WITH OUR SUPPLIERS?

Yes, the tool can be communicated to your supplier so that he can, for example, assess the recyclability of the product if he has the necessary elements. However, the producer, as defined by law, remains responsible for the assessment and the recyclability status communicated (Mostly recyclable / Entirely recyclable).

2.5 ARE SLA PRODUCTS COVERED BY THE 12 POINTS OF THE EQC (ENVIRONMENTAL QUALITY AND CHARACTERISTICS) LABELLING REQUIREMENT?

SLA products are not covered by all 12 points of the EQC. You can find the list of EQCs (Environmental Qualities and Characteristics) to be displayed for the SLA, ABJ Th and EEE sectors on the Ecologic website (https://www.ecologic-france.com/ecologic/recyclabilite-notions-et-obligations.html / https://www.ecologic-france.com/ecologic/recyclability-concept-and-obligations.html) as well as on the FAQ published by the Ministry for Ecology (https://www.ecologie.gouv.fr/encadrement-des-allegations-environnementales-et-information-duconsommateur-sur-produits).

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3 Assessment procedure

3.1 WHY DON'T SOME OF THE TOOL'S FUNCTIONS WORK (E.G. DROP-DOWN LIST) IN MY VERSION OF EXCEL?

The tool was developed in Excel and saved in .xlsx format. Since 2007, the .xlsx format has been the standard format for files saved without macros in Microsoft Excel. If you are using a version of Excel prior to 2007 (e.g. Excel 2003), certain functions will not work (e.g. the drop-down lists in cells C7 and C8 of the worksheet).

Given the limited number of companies using versions of Excel prior to 2007 and the complexity of managing several versions of the same tool in different versions of Excel, the tool is only available in the most recent format (available for 15 years) of Excel.

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3.2 WHY DOESN'T THE LIST BY PRODUCT TYPE INCLUDE THE FEDAS CLASSIFICATION?

The tool allows you to choose a type of product according to a classification specific to Ecologic and following a double entry logic:

1. Product families (**14 families**)
2. Type of products (**207 products** in these 14 families)

The choice of a product type is necessary because each type of product is allocated a treatment flow which determines the recyclability of the materials, as explained in 3.5.

There is a FEDAS list which proposes a unified commodity group coding for the entire sports industry sector. This list covers all the products in this sector, including products covered by the SLA sector and others covered by the textiles, household linen and footwear sector, the WEEE sector or by no EPR sector.

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This list contains **9906 product codes**.

To date, the use of the FEDAS coding system as an input to define its product type (and indirectly the processing flow considered) has not been adopted for the following reasons:

- A great deal of work is needed to sort the codifications to retain only those product codes that correspond to the products covered by SLA, even though the SLA sector is still in its infancy.
- Despite this sorting, the SLA-specific list could contain several thousand codes. For each code, it is necessary to define a specific processing flow. For a recent SLA sector, this can be complex.
- The SLA sector is still a work in progress, and the allocation of products to treatment streams is bound to change quite quickly, which would mean thousands of lines having to be revised each time it is updated.
- The precision of the FEDAS classification does not match the current logic of product recycling. *For example, the FEDAS list includes around forty product codes for various types of batons used in mountain sports, even though they all follow the same recycling process.*
- Conversely, some FEDAS codes may be difficult to allocate to a single treatment stream because the code designates a product terminology that is not very precise for recycling. *Example: The code "101963 - Spare parts" could be assigned to the ASL-Metals or ASL-Plastic flow depending on the type and composition of the spare parts in question.*
- This list of several thousand products may be useful for companies that are used to using this classification, but it becomes very complex for companies that do not use it, even though the

calculation tool is in Excel format and therefore works using the logic of a drop-down list (not very suitable for lists of more than a hundred references).

3.3 IS IT NECESSARY TO MAKE THE CALCULATION FOR ALL THE VARIATIONS OF A PRODUCT IN THE SAME RANGE?

The producer within the meaning of the law must be able to provide the recyclability status for all products. For similar products in a range and where the recyclability rate is relatively far from the recyclability ranges (50 and 95%), the producer can dispense with assessing the recyclability of all the products in the range.

Example: A range of scooters with a version with foam handles and a version with cork handles. If the recyclability assessment of the version with foam handles is 80%, then it does not seem necessary to assess the recyclability of the version with cork handles, given the total mass of the scooter and the mass contribution of the handles.

However, **this remains the responsibility of the producer**, who must be able to demonstrate, in the event of an inspection, that the recyclability status of the product can be verified by calculation using the tool.

3.4 WHY DO I NEED TO ENTER THE PRODUCT REFERENCE NUMBER?

The recyclability calculator is currently in Excel format and can be used to calculate an infinite number of products. Users must therefore manage the diversity of their products themselves (one calculation per product) and archive the information for each Excel.

It is therefore necessary to define the commercial reference in order to demonstrate that the information displayed to consumers on a given reference is consistent with the assessment carried out using this tool.

3.5 WHY IS IT IMPORTANT TO IDENTIFY THE PRODUCT CATEGORY? HOW DOES THIS AFFECT THE RECYCLABILITY OF THE PRODUCT?

To date, SLA equipments can be oriented towards 4 treatment flows:

- ASL-Metals (for products with a high metal component content)
- ASL-Plastics (for products with a high plastic component content)
- ASL-Cycles (for Cycle sector products)
- ASL-Non-specific (for all products that cannot be channelled through one of the above channels or for which a specific channel has not yet been set up)

So for each type of product, a flow is automatically assigned with recyclability rates by material, specific to each flow.

In the case of a product allocated to the "ASL-Non-specific" flow, this may vary as a result of information on its composition. If its composition exceeds 50% metals or 50% plastics, it will be reallocated to the "ASL-Metals" or "ASL-Plastics" flow respectively.

This type of product (which on average has a very heterogeneous material composition or contains non-recyclable materials) is in most cases sent to the "ASL-Non-specific" flow. However, if a product in this family has a particular composition and contains predominant materials (metals or plastics), it is

highly likely that it will be directed to a flow organised to recycle as much of this type of material as possible.

3.6 HOW IS RECYCLABILITY CALCULATED ?

Recyclability is calculated as the ratio of the recyclability of each material to its total mass:

$$Recyclability = \frac{\sum Material\ mass_i \times Material\ recyclability_i}{Product\ total\ mass}$$

With $Recyclability\ Material_i$ equals 0 or 1

Based on the total mass of the product and the information provided on the materials and their masses, the tool provides an assessment of recyclability according to the 3 regulatory thresholds:

- < 50% recyclability = "Non-recyclable" → According to the decree, no information must be made available to consumers;

- 50 <= X< 95% recyclability = "Mostly recyclable" → Display the words "Mostly recyclable product" ;

- > 95% recyclability = "Entirely recyclable" → Display the words "Entirely recyclable product".

3.7 WHAT DOES THE "TOTAL MASS OF THE PRODUCT" MEAN FOR CHECKING THE 50% THRESHOLD?

The total mass to be taken into account to verify that the 50% threshold has been reached is the mass of the product placed on the market (with its accessories, if any), excluding packaging. The recyclability of packaging must be assessed in accordance with the information provided by the eco-organizations approved for these sectors.

3.8 DO I NEED TO ENTER ALL THE MATERIALS IN THE PRODUCT, AND AT WHAT LEVEL OF DETAIL DO I NEED TO DO THIS?

The recyclability calculation is based on **a "materials" approach**. While the tool allows you to opt for a component/part approach (each line corresponds to a part and its material), it is recommended that you opt for a material approach, grouping each similar material together by line. If you wish, you can use the "Comments" column to specify which parts are concerned by this line (for better monitoring of your calculations over time).

We also recommend that you fill in the composition of the product starting with the heaviest materials (from the heaviest to the lightest). Based on the quantities entered, the tool will tell you whether it is worth continuing to fill in the composition to consider a change in recyclability status.

By way of example, recyclability is calculated using the formula in 3.6, the recyclability status will not change for a product for which 80% of the materials by mass are entered and which, with this information, obtains a recyclability of 55% (*Mostly recyclable* status). In fact, even if the remaining 20% of the materials to be entered are recyclable, the recyclability will increase to 75%, which does not allow the product to have *Fully Recyclable* status.

3.9 HOW OFTEN IS THE SLA RECYCLABILITY CALCULATION TOOL AND ASSOCIATED METHODOLOGY UPDATED?

Updates to the ECOLOGIC tool are planned on a quarterly basis for ergonomic reasons. Structural updates (e.g. changes in the recyclability rate of materials) will be carried out approximately every year, once the tool is well understood by members and the SLA recycling sector in France is more developed. The current version (v1) is an initial version, which will be developed as part of a continuous improvement process.

A version tracking tab is available in the tool.

3.10 IS IT POSSIBLE TO DIFFERENTIATE BETWEEN PRODUCTS THAT CAN BE RECYCLED ONCE AND THOSE THAT CAN BE RECYCLED MANY TIMES?

The challenge of recyclability lies mainly in the materials used. Recycling processes transform a product into recycled materials. As a result, a product in itself can never be recycled several times. On the other hand, it may be made up of materials that have already undergone several recycling processes. Studies and experiments are planned to assess the quality of materials derived from recycling, and thus identify whether the recyclability of certain materials could be altered after several recycling cycles. However, the sector is still too new to have this type of information to date, so the calculator does not take this issue into account (a material may or may not be recyclable).

3.11 ARE NEW VERSIONS OF THE CALCULATION TOOL PLANNED?

Updates to the ECOLOGIC tool are planned on a quarterly basis for ergonomic reasons. Structural updates (e.g. changes in the recyclability rate of materials) will be carried out approximately every year, once the tool is well understood by members and the SLA recycling sector in France is more developed. The current version (v1) is an initial version, which will be developed as part of a continuous improvement process.

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4 Recyclability of materials

4.1 I CAN'T FIND A DIRECT MATCH FOR SOME OF THE MATERIALS IN MY PRODUCT IN THE CALCULATION TOOL

If your material corresponds to an existing material family but you cannot find it in the list, then choose the "Other..." material in the material family.

If your material does not correspond to any of the material families, then choose the "Other" family and then the "Other material" material.

The list of materials by material family can be accessed in the hidden "Materials DB" tab.

4.2 HOW CAN LABELS STUCK ON THE PRODUCT BE TAKEN INTO ACCOUNT WHEN CALCULATING RECYCLABILITY?

The label must be considered as non-recyclable by selecting the "Other" family and then the "Other material" material. The mass of the label must be taken into account in the total weight of the product.

4.3 I DON'T HAVE ACCESS TO THE DETAILED COMPOSITION OF CERTAIN MATERIALS OR COMPONENTS IN MY PRODUCT: CAN I EXCLUDE THEM FROM MY ASSESSMENT AND FROM THE TOTAL MASS OF THE PRODUCT?

The total mass to be taken into account to check that the 50% threshold has been reached is the mass of the product placed on the market (with its accessories if any), excluding packaging. By default, materials or components for which the producer cannot find specific information on their composition or recyclability must be modelled by selecting the "Other" family and then the "Other material" material.

Their mass must be taken into account in the total mass of the product.

4.4 HOW DO YOU CHECK WHETHER A PLASTIC HAS A DENSITY OF LESS THAN OR GREATER THAN 1.1?

This information is generally given in the technical data sheets or material safety data sheets drawn up by plastics suppliers, sometimes under the heading "specific gravity". In the absence of this information, by default the density to be considered must be >1.1, which means that this material is not recyclable.

4.5 WHY ARE ONLY CERTAIN PLASTIC RESINS CONSIDERED RECYCLABLE UNDER DECREE 2022-748 FOR THE SLA SECTOR?

SLAs contain a multitude of different resins, which are themselves processed with a variety of formulations in terms of fillers and additives. Existing processes aim to identify and sort these resins using different techniques (optical sorting and/or densimetry in particular) in order to direct them into recycling channels. However, the variety of resins used, the share of these resins in the recycling chain and the diversity of formulations mean that, on an industrial scale and in practice, it is not possible to obtain sorting quality and purity levels for each of these resins that satisfy the specifications set by potential users downstream of the recycling chain (plastics manufacturers). For example, PET, which is recycled in the packaging sector, is not considered recyclable in the SLA sector. As a result, only certain resins can currently be identified and sorted with quality levels that guarantee the existence and sustainability of outlets, and thus meet the conditions set by the decree.

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4.6 HOW IS DOWNCYCLING TAKEN INTO ACCOUNT?

There is no regulatory definition of "downcycling". However, article L541-1-1 explicitly differentiates "recycling" from other treatment methods such as "material recovery" or "reclamation". As decree no. 2022-748 only considers recycling operations when assessing the recyclability of materials, processes that do not meet the regulatory definition of "recycling" are not considered.