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Collaborative tool for calculation of Product Carbon Footprint for adhesive tapes

The Product Carbon Footprint (PCF) describes the amount of greenhouse gas (GHG) emissions caused by a product in its various life cycle phases. Either the entire life cycle ("cradle-to-grave") or a defined life cycle phase (e.g. "cradle-to-gate") can be considered.[1]

Afera supports the European Green Deal's goal of reducing net emissions of GHG in the EU to zero by 2050 and becoming the first continent to become climate-neutral. Products of the adhesive tape industry make an important contribution to this goal. The PCF is becoming increasingly important in this context and is an important indicator for driving the transformation towards a sustainable circular economy through innovation. The PCF is an important indicator of the sustainability of a product, that together with other indicators as material and energy efficiency, durability or recyclability make up the life cycle analysis (LCA). Availability of PCF is also a prerequisite for downstream users of a product to be able to calculate their GHG emissions (Scope 3 upstream). Users of adhesive tapes need specific information from their suppliers to be able to accurately calculate the PCF of their own products.

Established general standards such as ISO 14067 are used as a basis for calculation of PCF, but specific assumptions are required for a specific sector or product.[2] Values for raw materials, logistics or energy use contributing to the PCF can be obtained from industry averages or database values (i.e. secondary data), but the quality of the data quality can be variable. Real-world data from the company's own processes, as well as accurate (primary) data from third parties such as suppliers, service providers, end-users and other players in the value chain, should whenever possible be used for the calculation of PCF. Availability of an aligned methodology and a curated tool for general use in a sector would facilitate the calculation of more accurate PCF values of a company's own products and increase transparency along the value chain. An industry standard for the chemical industry was established in 2022 through the "Together for Sustainability" (TfS) initiative.[3]

Afera is committed to ensuring that PCF of adhesive tape products are calculated in an aligned way and with little effort, in order to meet future legal requirements and requests from the supply chain. To this aim, Afera is collaborating with the German Adhesive Association (IVK) to develop a methodology and a tool of voluntary use to facilitate the calculation of PCF of adhesive tapes. This tool would be curated to include the contribution to the PCF of the most commonly used raw materials, components, packaging materials and energy sources used in the manufacturing of adhesive tapes. Applying this methodology and using this tool, companies in the sector will be able to readily generate reliable and accurate PCF values that can be communicated downstream in the supply chain. This will enable the calculation of PCF of products incorporating adhesive tapes in a dependable way.

1 Definition of greenhouse gas emission in: ISO 140671: 2018, Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification
2 ISO 14067:2018, Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification
3 TfS-Guideline - PCF Guideline for the Chemical Industry