

Position on Mass Balance Chain-of-Custody and Environmental Product Declaration (EPD)

23rd February 2023*

Mass balance is crucial for the transition of the construction sector towards a circular economy

Ensuring more sustainable and climate resilient buildings and infrastructure is one of the central priorities of the European Green Deal¹. In order to achieve the targeted climate neutrality by 2050, the renovation rate and depth must be increased. The CO₂ footprint of construction products and new buildings must be significantly reduced.

Environmental Product Declarations (EPDs) provide quantitative statements on the environmental performance of construction products providing the basis for the sustainability assessment of buildings. EPDs ensure transparent, fact-based and credible information of construction products' environmental performance.

The use of renewable and/or recycled feedstocks in the chemical production of construction products can save fossil resources and can contribute to the reduction of greenhouse gas emissions². Innovative technologies are responding to the need to shape new material cycles for a Circular Economy. Increasing the circularity of construction products while maintaining high quality and performance is key.

Indeed, not all sectors and value chains can currently benefit from dedicated (segregated) production systems to answer the customer demand for recycled or bio-based products. Such production systems require time, investments and sufficient volumes of the raw materials. To access more sustainable products and to become a driver of the use of renewable and/or recycled resources, customers must be allowed to source from other models. Mass balance credit chain-of-custody method is a solution to quickly grow supply of more sustainable products with existing at-scale technologies for the benefit of the customer.

The mass balance credit method is a credible, transparent and well-established chain-of-custody method according to ISO 22095:2020. It is a key enabler to process sustainable feedstock together with fossil feedstocks in existing complex chemical production networks. The transition to a circular economy can be accelerated without compromising the quality and performance of the end products. The principle of the mass balance credit method is already established in other sectors like the wood and biofuel industry applying 3rd party certification schemes (e.g. FSC, ISCC-EU, REDcert-EU). It works similarly to green electricity, which is already accepted for EPDs.

In order to secure transparency, trustworthiness and reliability of the mass balance method, it must fulfill some minimum requirements. For example, avoidance of double counting and transparent communication by using trustworthy claims can be guaranteed by widely recognized third-party certification schemes (e.g., ISCC+, REDcert²). Clear statements that the calculation is based on a mass balance credit method enables customers to correctly interpret the claim. The underlying LCA calculation for EPDs is conform to respective ISO standards (e.g. ISO 14040/44), which has been already proven in several critical reviews³. Some EPD program operators (e.g. IBU in Germany) have already established rules for the verification of requirements for renewable feedstocks, which

¹ COM(2019) 640 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN>

² JRC (2021): Environmental effects of plastic waste recycling; JRC (2022): Environmental and economic assessment of plastic waste recycling; nova institute (2022): Renewable Carbon as a Guiding Principle for Sustainable Carbon Cycles

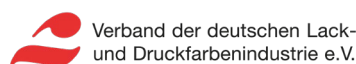
³ Jeswani et al (2019), Science of The Total Environment, 687, 380-391

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are based on the above-mentioned requirements (e.g. established certification schemes). A harmonization of rules for the application of credit mass balance shall be the target in Europe.

In order to take advantage of these sustainable solutions, **the mass balance credit method as chain-of-custody must be recognized for renewable/recycled feedstocks in European standards and for EPD program operators. EPDs should incorporate the mass balance credit method, fostering an immediate and smooth transition with direct environmental benefits (e.g. CO₂ reduction) and limited costs for society.** Such recognition is essential to avoid shortages in construction materials supplies and to use existing infrastructures that will contribute to the EU Green Deal and Renovation Wave ambitions. It will also pave the way for future circular models in other sectors.

List of supporting Associations



List of supporting Companies

