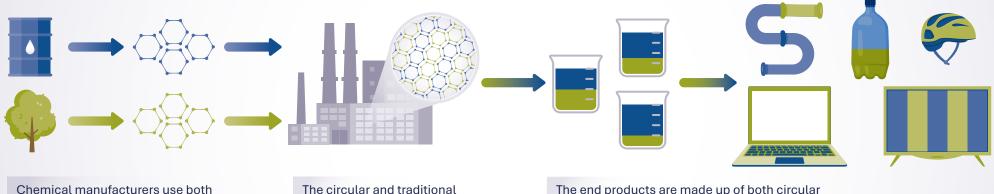
What is Mass Balance?



Mass balance is a chain of custody methodology that helps track materials through a supply chain when different types of raw materials—like circular (e.g., renewable, bio-based) and traditional (e.g., fossil fuel-based) —are mixed together. Even though the materials are blended and can't be physically separated, companies use mass balance to track the flow of materials that are comingled during product production.* Mass balance has been used for decades by a wide range of industries, such as renewable energy and FairTrade cocoa and coffee, to support sustainable sourcing statements.

Chemical companies use mass balance to track and certify their use of renewable materials (e.g., biobased feedstocks) or recycled content to make a variety of products and to support their circularity goals. It allows companies to use their existing systems and equipment, while gradually increasing the use of more circular materials—helping companies make strategic investments to enhance circularity over time.



circular (e.g., renewable, bio-based) and traditional (e.g., fossil fuel-based) materials to make chemical feedstocks.

materials are mixed in a chemical plant to make chemical products.

The end products are made up of both circular and traditional materials. Third-party certifiers can help verify transparent claims on finished products.

Attribution (or allocation) refers to tracking the proportion of both circular and traditional materials, which can be referred to as "input materials," that end up in the manufactured end products, or the "output materials." Two commonly used attribution methods for mass balance are proportional attribution and free attribution.

Proportional attribution/allocation: Distributes the percentage of renewable input materials in equal proportions across output materials.









Each product claims 25% renewable materials

Free attribution/non-proportional allocation: Allows proportion of renewable input materials to be freely assigned to any product.











Each product claims a portion of renewable materials

*Note: Mass balance accounting can also be used to track nonrenewable materials within a product (e.g., most recycled content for plastics is made from nonrenewable materials).



Certifications:

Mass balance accounting supports transparency and accurate tracking of recycled materials. Third-party certifications of mass balance methods enable companies to credibly communicate the use of bio-based or recycled content in their finished products. Some commonly used certifications include: GreenCircle Recycled Content, ISCC PLUS, REDcert, Roundtable on Sustainable Biomaterials, SCS Standards Certification for Biobased Content, SCS Global Services' Recycled Content.