



What is mass balance?

Sourcing

Bridgestone is scaling up the use of renewable and recycled materials in our manufacturing, with the goal of replacing more fossil-based and mined materials over time. Mass balance helps us do this.

Manufacturing

Renewable, recycled, fossil-based and mined raw materials are mixed in a complex supply chain and manufacturing process.

With the mass balance approach, we track and verify our renewable and recycled material consumption on site using bookkeeping with third party certification.

Attribution

Actual tire composition does not change. We attribute renewable and recycled content to a subset of the tires. It is not possible to guarantee how much renewable or recycled content is in each tire because of the mixing process.

Rules of attribution:

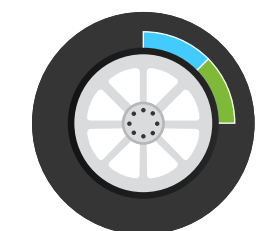
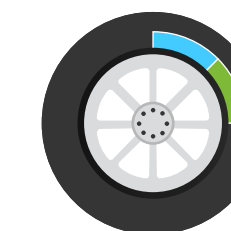
- Never claim more renewable or recycled content of an individual component than what can technically be in the tire.
- Across the range, never claim more renewable or recycled content than what entered our manufacturing process.
- Account for material loss during manufacturing.
- It must be chemically/technically possible for the input material to be included in the attributed output.

For example purposes only.



- Fossil & Mined Materials
80%
- Recycled Materials¹
10%
- Renewable Materials²
10%

Our material mix includes 20% certified recycled and renewable inputs. We can attribute renewable and recycled content across our tires in different ways, for example, a higher concentration in fewer tires or a lower concentration in more tires. We choose to attribute more certified content to fewer tires to make a more meaningful claim.



SAMPLE CLAIM 1:
"100% of the tires are linked to 20% renewable and recycled material following the ISCC mass balance approach."

OR

SAMPLE CLAIM 2:
"50% of the tires are linked to 40% renewable and recycled material following the ISCC mass balance approach."



ISCC PLUS Certification

ISCC PLUS³ certification happens throughout sourcing, refining, tire manufacturing. ISCC PLUS certified companies are audited annually for adherence.

Definitions

- 1. Recycled materials:** Material that has been reprocessed from recovered [reclaimed] material by means of a manufacturing process and made into a final product or into a component for incorporation into goods or services. (ISO 14021:2016). Example: Recycled carbon black, Tire Pyrolysis oil.
- 2. Renewable materials:** Material that is composed of biomass from a living source and that can be continually replenished. The material shall come from sources that are replenished at a rate equal to or greater than the rate of depletion. (ISO 14021:2016). Example: Natural rubber, bio-oils, bio resource-derived synthetic rubber, etc
- 3. ISCC PLUS:** The International Sustainability and Carbon Certification (ISCC) PLUS system is a globally recognized certification platform used to track and verify renewable and recycled material consumption in complex supply chains.

Why this approach?



Making Progress Today

Mass balance helps us to scale our use of renewable and recycled content quickly in the short term...

Driving Demand

Which creates more immediate interest in renewable and recycled content...



Long-Term Ambition

Which furthers progress across the industry, and helps create a more circular lifecycle for tires.



How is Bridgestone transforming tire production?

We're increasing our use of renewable and recycled content over time

