



Press Release

22.01.2024

Schwalbe publishes detailed life cycle assessment for Green Marathon

Savings of 41% CO₂eq compared to predecessor model thanks to recycled and renewable materials



It is the world's first bicycle tire with a closed material loop - Schwalbe has now presented a detailed Life Cycle Assessment (LCA) to quantify the environmental impact of the Green Marathon. The result: With 1.43 kg CO₂ equivalents (CO₂eq)*, the Green Marathon saves a total of 41% CO₂eq compared to its predecessor model. The Marathon from 2010 already had a lower CO₂eq footprint than other bicycle tires thanks to the use of recycled materials, including in the puncture protection.

The life cycle assessment was calculated on the basis of strict scientific criteria and in compliance with current standards. Schwalbe worked closely with both suppliers and pre-suppliers to collect the relevant data.

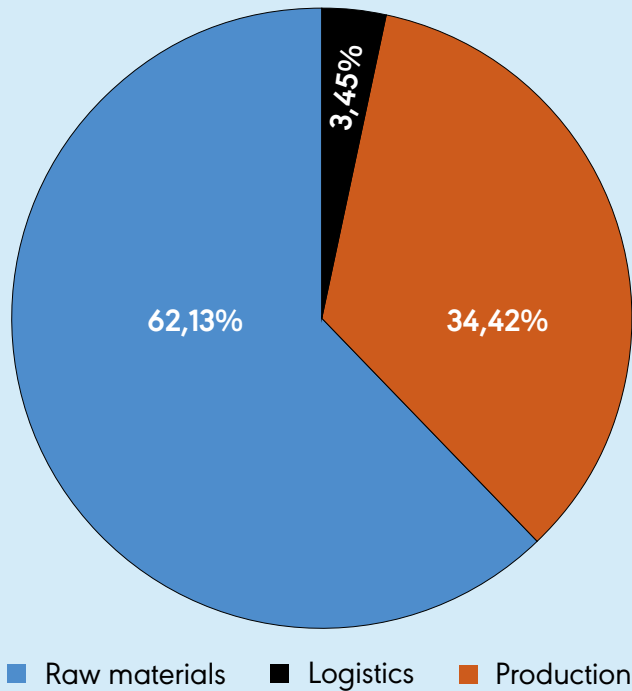
Raw materials cause the majority of emissions

The product carbon footprint (PCF) calculated with the life cycle assessment provides a key finding: the majority of emissions, 62% in total, are caused by raw materials. Approximately one-third is attributed to the energy consumption during production, while just under 3.5% is induced by transportation logistics. This cements the importance of

research into raw materials and materials for reducing environmental impacts. Schwalbe has been working

intensively on the ecological material optimization of all tires and inner tubes since 2013.

PRODUCT CARBON FOOTPRINT (PCF) GREEN MARATHON

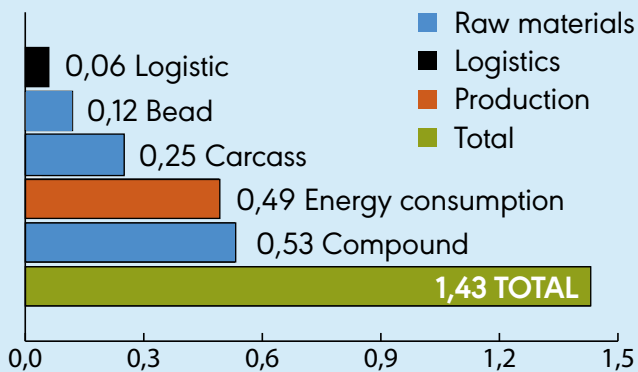


Sebastian Bogdahn, (Environmental R&D Manager): „The Green Marathon is the result of years of research and development work and a flagship product - this is underlined by the result of the life cycle assessment. At the same time, the work doesn't stop there for us. Our goal is to create life cycle assessments for all tires and tubes by 2025 and at the same time further reduce the environmental impact of our products.“

Schwalbe has achieved most of the CO₂eq savings in the Green Marathon by using recycled and renewable raw materials. The tire is the first product to use 100% recycled carbon black (rCB). The rCB of recycling partner Pyrum Innovations AG is a direct product of Schwalbe tire recycling and replaces fossil-based carbon black.

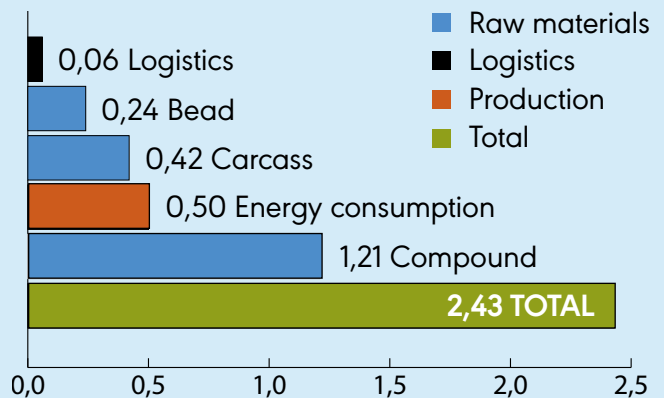
PRODUCT CARBON FOOTPRINT (PCF) GREEN MARATHON

IPCC AR6, GWP 100 excl. biogenic CO₂ (in kg CO₂ eq./tires in 40-622)



PRODUCT CARBON FOOTPRINT (PCF) MARATHON (2010)

IPCC AR6, GWP 100 excl. biogenic CO₂ (in kg CO₂ eq./tires in 40-622)



* The calculation is based on the best-selling tire size (40-622 with a weight of 810 grams for both models), the exact value varies for other tire sizes.

What's next?

The life cycle assessment for the Green Marathon reflects Schwalbe's current status of sustainable product development and research. The family-owned company is currently working at full speed to further develop its life cycle assessment metho-

dology in order to calculate and publish life cycle assessments for all Schwalbe core products by 2025. In addition to raw materials and production, the use phase and disposal or recycling of the products will also be included.

Detailed information on the calculation

To determine the CO₂eq savings, a detailed PCF of both Marathon models was calculated according to DIN EN ISO 14067 and evaluated using the „LCA for Experts“ software in accordance with the current IPCC AR6 standard (GWP 100, excl. biogenic CO₂). Specifically, the study is a „partial PCF“, which describes the total amount of greenhouse gases emitted by a tire from raw material extraction to the finished product („cradle-to-gar-

te“) and is expressed as CO₂ equivalents. This includes all raw materials that make up at least 5 percent by mass of the total weight of the tire. By 2025, the system boundary of the life cycle assessment is to be extended so that the complete product life cycle from raw material extraction to recycling („cradle-to-cradle“) is mapped and all raw materials from 1 mass percent are included.

