Fact Sheet on Life Cycle Assessment (LCA)

Product durability – the Cornerstone of our Environmental Commitment

Since 1992, Gore Fabrics has been using an ecological evaluation tool, Life Cycle Assessment (LCA). LCA is the global standard for assessing the total environmental impact of a finished product.

While carbon footprinting only looks at one factor, LCA takes into account all aspects of a product's ecological footprint. This includes the consumption of resources and energy; emissions to air, water and land; health, ecosystems and more. This is particularly important when comparing different product options or process changes side-by-side so that unfavorable trade-offs can be avoided.

Gore Fabrics’ current study was conducted in full compliance with the DIN EN ISO 14040:2006 and DIN EN ISO 14044:2006 standards. This means that the product was evaluated over its whole life cycle, from “cradle to grave”, taking suppliers input into account.
Functional Unit

- The functional unit is a measure of the service delivered by a product.
- In the case of our latest report the functional unit was set as “the use of a single windproof, waterproof and breathable outdoor garment over five years.”
- The functional unit provides a reference or control that enables the comparison of two products that provide an equivalent service.

Scope: from cradle to grave

Assumptions

- The jacket is assumed to be separately washed, re-impregnated and tumbled twice a year, and last five years, while continually fulfilling our minimum performance criteria.
- After a five year use phase, the garment is assumed to end up in a landfill in the US
Results & Conclusions

The results of the LCA show that the jacket emits a total of 72.7 kg CO2 eq., it consumes 2.08 m³ fresh water and 992 MJ of primary energy over its entire lifetime. To put it in perspective: for a pair of jeans 32.3 kg and of CO2 eq. are emitted over its entire lifetime, but multiple pairs may need to be purchased during the lifetime of a GORE-TEX® jacket and jeans provide little to no protection to the user.

Assessing the contributions that single stages of the jacket's life cycle have on the overall impact values shows that consumer care, textile supply chain, distribution and Gore processes have a significant impact, while the impact of disposal is negligible.

The jacket's production (Gore processes incl. PTFE, textile supply chain, garment manufacturing and accessories) and distribution have an important impact – 65% of GWP (global warming potential), which underlines the importance of longevity as the single most influential parameter for improving several environmental impacts.

In other words: the longer a functional outdoor jacket lasts, the smaller its annual environmental impact will be.

Although 82% of GWP lies outside of Gore's direct control, we strive to reduce the overall footprint of our outdoor apparel through a mindful choice of fabrics and suppliers, through cooperation with the upstream textile supply chain and through providing information to consumers on the right type and frequency of care.

Above all, Gore is continuing its efforts to further enhance durability, the factor which has the most significant influence on the environmental footprint of a GORE-TEX® jacket.

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