Life Cycle Summary

August 2022

2022 LCA SUMMARY

PopSockets' life cycle assessment gives us a holistic look of the **environmental footprint of 90% of the products** sold annually. This process has allowed us to develop a detailed understanding of our **current impact** and **refine our production process** and materials to **ensure that the products that support our plant-forward corporate partnerships are good for both people and the planet.**

OVERVIEW

PopSockets set out to measure the life cycle of the majority of the products we sell in efforts to **understand and measure our holistic environmental footprint.** We worked with SCS Global Services to conduct cradle-to-gate LCAs for 29 product lines over the course of several months, in accordance with the ISO 14040 and 14044 standards. Impacts assessed were global warming potential, acidification potential, eutrophication potential, smog creation potential, ozone depletion potential, fossil fuel depletion potential, primary energy demand, use of freshwater, and other waste flows. SCS was also engaged to create a tool that will allow for future estimation of the environmental impacts of new materials and product lines.

Carbon Footprint Results

The average carbon footprint of each product group shown takes into account the variation across all of PopSockets' production facilities in the US and China. One of the major focuses of our scope 3 emissions analysis has been **the impact of switching from virgin polyethylene-based materials to more sustainable plant-based materials**—the results of which can be seen in the comparison between our standard PopGrip and the PopGrip Plant.

CARBON FOOTPRINT RESULTS

Product	Best Current Case* g of CO_2 eq	Factory Average g of CO_2 eq
Standard PopGrip	85.4	95.2
PopGrip Plant	68.4	86.7
Luxe-Premium PopGrip		246.3
MagSafe PopGrip		734.5
PopWallet+		319
MagSafe PopWallet+		1080
Flex Mount		932
Vent Mount		302
Dashmount		1280
Slide Stretch PopGrip		205
PopCase		409
PopCase MagSafe		573.7
PopCase Plant		537.7
PopCase MagSafe Plant		366.6

**** Based on projected numbers from our US-based manufacturer.*

Proposed emissions reductions measures may further lower best-case scenario calculations in the future.

Goals & Process

PopSockets partnered with SCS Global Services (SCS) to conduct cradle-to-gate life cycle assessments (LCAs) on 29 key product lines including grips, cases, and mounts. These products represent **~90% of units** sold annually. Cradle-to-gate LCAs cover the environmental impact of everything from extraction of original source materials to the time the product leaves the factory gate to be distributed to sellers. This includes quantifying the **total carbon footprint** of the products throughout raw material extraction, processing of raw materials, upstream material transport, and product manufacturing and packaging, in addition to evaluating a variety of other potential environmental impacts associated with the manufacturing process at facilities in the United States and China. We chose to analyze the **environmental footprint** up to the factory gate because that is where the vast majority of the emissions from PopSockets' products are generated. Unlike products that require electricity or other emissions sources to use, **once PopSockets' products are in consumers' hands, they create no additional environmental impact until their end of life, at which point they may be recycled.** For the purposes of reporting our carbon footprint to Climate Neutral and the CDP, we account for freight and distribution emissions as well, but these were not included within the scope of this LCA.

GOALS + PROCESS

This LCA was conducted in accordance with the requirements of ISO 14040 and ISO 14044 standards, which are the accepted industry standards for conducting product LCAs. SCS was also engaged to create a tool that will allow for future estimation of the environmental impacts of new materials and product lines. Assessment of total carbon emissions and associated environmental impacts allows PopSockets to make the most informed possible decisions about design, materials, and production facilities as we track our strive to understand and reduce our impact at both a product and company level. Using the insights provided by the LCA, PopSockets has prioritized the integration of high quality plant-based and recycled materials as preferential and more sustainable replacements for traditional petroleum-based plastics across out core product lines in order to ensure a steadily reduced footprint over time. Company-level emissions numbers will be published annually in our sustainability report, with the goal of transparently tracking the impact of our emissions reductions strategies over time.

System Boundary & Environmental Impact

This LCA calculated the global warming potential (GWP) of the emissions that occur as a result of the production of each of the studied PopSockets products. GWP is calculated in terms of kilogram CO2 equivalent (“kg CO2 eq”), meaning that the footprint calculation of each product takes into account not only CO2 emissions, but the total impact of all GHGs (greenhouse gasses) that are emitted over the course of the production process. The Tool for Reduction and Assessment of Chemicals and Other Environmental Impacts (TRACI) assessment method was used to determine impacts in the categories of GWP, acidification potential, eutrophication potential, smog creation potential, ozone depletion potential, and fossil fuel depletion potential.

This study also looked at the primary energy demand, use of freshwater, and waste flows within the cradle-to-gate boundaries, which included the following aspects of each life cycle stage:

> RAW MATERIAL EXTRACTION

This stage includes extraction of virgin materials and reclamation of non-virgin feedstock. Resource use and emissions associated with both extraction of the raw materials and product component manufacturing are included.

> PROCESSING OF RAW MATERIALS

The impacts associated with transport of the product component materials to the manufacturing facilities are included in this stage.

> UPSTREAM MATERIAL TRANSPORT

This stage includes all the relevant manufacturing processes and flows, including the impacts from energy use and emissions at the production facilities. Production of capital goods, infrastructure, manufacturing equipment, and personnel-related activities are not included.

> PRODUCT MANUFACTURING + PACKAGING

This stage includes the production of the product packaging materials.

Key Learnings

PopSockets' life cycle assessment gives us a holistic look of the environmental footprint of 90% of the products sold annually. This process has allowed us to develop a detailed understanding of our current impact and refine our production process and materials to ensure that the products that support our plant-forward corporate partnerships are good for both people and the planet.