Pixel 9 Pro XL

Product environmental report

Environmental sustainability at Google

At Google, operating in an environmentally sustainable way has been a core value from the beginning. As our business has evolved to include the manufacturing of electronic products, we've continually expanded our efforts to improve each product's environmental performance and minimize Google's impact on the world around us.

This report details the environmental performance of the Pixel 9 Pro XL over its full life cycle, from design and manufacturing through usage and recycling.

Product highlights

The Pixel 9 Pro XL is designed with the following key features to help reduce its environmental impact:


UL ECOLOGO
PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 110
GOLD

- ⊘ UL Ecologo Gold[1,2]
- ⊘ PVC-free[3]
- ⊘ Brominated Flame Retardant (BFR)-free[3]
- ↻ Designed with recycled aluminum to reduce its carbon footprint[4]
- ↻ 100% plastic-free packaging[5]

Greenhouse Gas (GHG) emissions

The production, transportation, use, and recycling of electronic products generate GHG emissions that can contribute to rising global temperatures. Google conducted a life cycle assessment on this product to identify materials and processes that contribute to GHG emissions, with the goal of minimizing these emissions.

Estimated GHG emissions for Pixel 9 Pro XL assuming three years of use:[6] 73 kg CO_2e

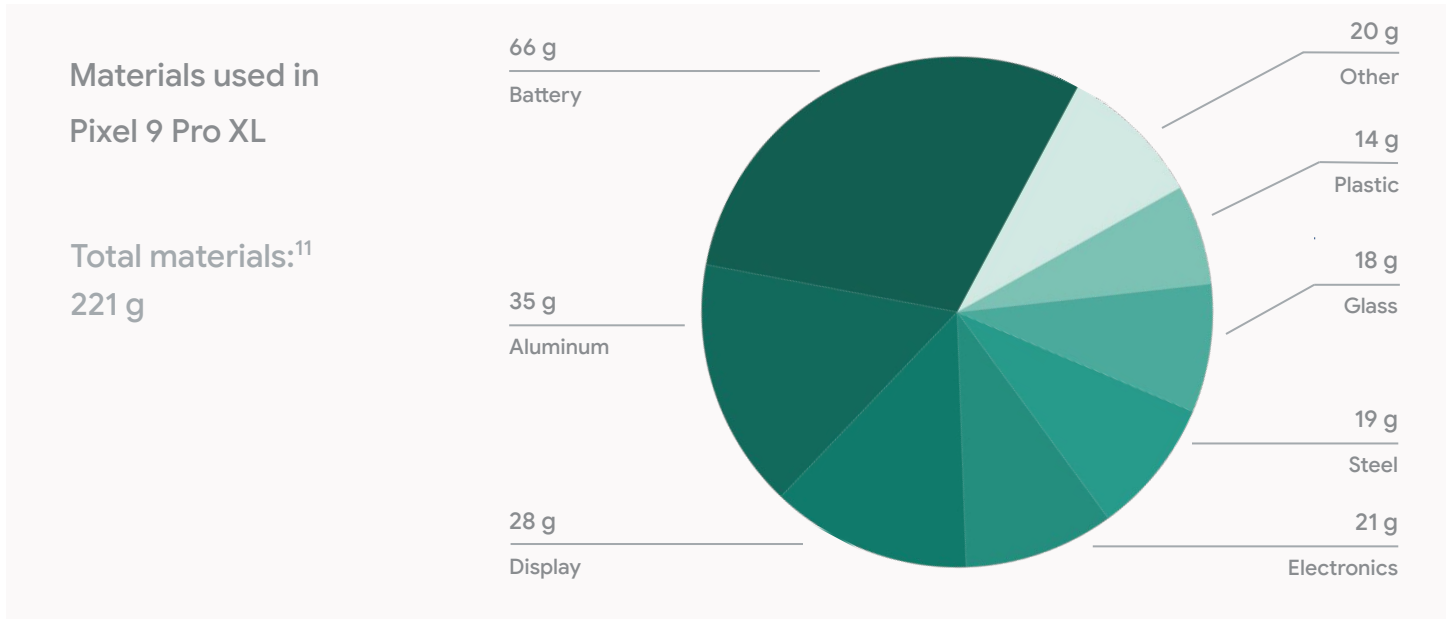| Production	Transportation	Customer Use	Recycling
81%	3%	15%	1%
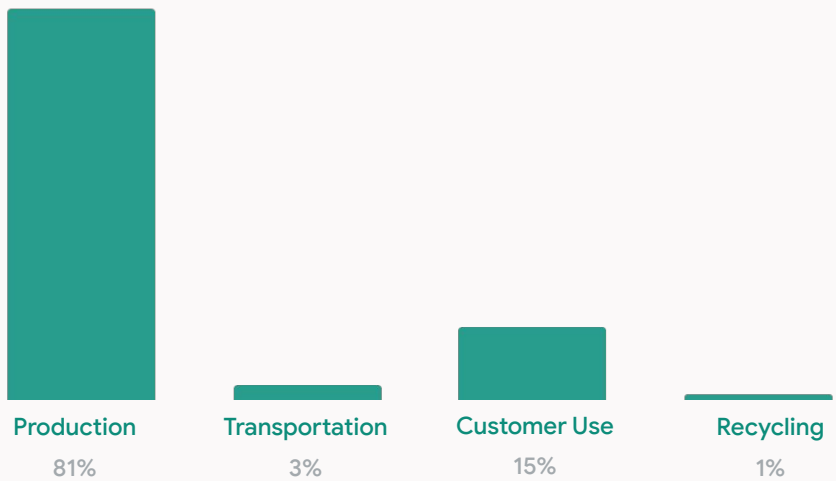
Energy efficiency

The Pixel 9 Pro XL incorporates power-management software to maximize battery-charging efficiency and extend battery life during use.

Energy efficiency of Pixel 9 Pro XL

	115 V, 60 Hz	230 V, 50 Hz
Standby (battery maintenance mode) power[7]	0.17 W	0.21 W
Annual energy use estimate[8]	9 kWh	9 kWh
Annual cost of energy estimate	US$1.52[9]	€2.56[10]

Material use

Pixel 9 Pro XL is designed to be light and compact. Minimizing the size and weight of the Pixel 9 Pro XL allows materials to be used more efficiently, thereby reducing the energy consumed during production and shipping as well as minimizing the amount of packaging.

Materials used in Pixel 9 Pro XL

Total materials:[11] 221 g

66 g
Battery

35 g
Aluminum

28 g
Display

20 g
Other

14 g
Plastic

18 g
Glass

19 g
Steel

21 g
Electronics

Recycled materials

↻ Pixel 9 Pro XL is made with at least 18% recycled materials based on product weight

↻ The aluminum in the housing is 100% recycled content[12]

↻ Pixel 9 Pro XL magnets of the haptics engine are made with 100% recycled rare earth elements[13]

↻ Pixel 9 Pro XL uses 100% recycled tin in the solder of all Google designed rigid and flexible printed circuit boards[14]

↻ Of the 17 plastic components in Pixel 9 Pro XL, 10 are made with recycled content that is at least 63% recycled plastic[15]

Battery

⊘ Lithium-ion polymer

Restricted substances

Historically, many electronic devices contained materials such as lead, mercury, cadmium, and brominated flame retardants that pose environmental and health risks. We designed Pixel 9 Pro XL to meet global regulations that restrict harmful substances, including the following:

- ⊘ European RoHS Directive restrictions on lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), and four different phthalates (DEHP, BBP, DBP, DIBP)

- ⊘ European Battery Directive restrictions on lead, mercury, and cadmium in batteries

- ⊘ European Packaging Directive restrictions on lead, mercury, cadmium, and hexavalent chromium in packaging

Voluntary substance restrictions

Pixel 9 Pro XL also meets the following voluntary substance restrictions:[16]

- ⊘ PVC-free[3]

- ⊘ Brominated Flame Retardant (BFR)-free[3]

Packaging

Pixel 9 Pro XL comes in more consciously designed packaging. Our lighter and more compact packaging is built with recycled and responsibly sourced fibers and continues to be 100% plastic-free, improving recyclability.[17]

Ethical sourcing

Google and its subsidiaries are committed to ensuring that working conditions in our operations and in our supply chains are safe, that all workers are treated with respect and dignity, and that business operations are environmentally responsible and ethically conducted. Learn more about our expectations for manufacturing partners in the Google Supplier Code of Conduct, our 2023 Supplier Responsibility Report, and our Conflict Minerals Policy.

Learn more

For more information about our environmental sustainability initiatives— including case studies, white papers, and blogs—please see our Sustainability website and our 2024 Environmental Report.

Learn how to recycle your used device in the Google Store Help section of our website.

Endnotes

1. ECOLOGO® Certified products are certified to ECOLOGO® standards for reduced environmental impact. For more information, visit ul.com/el. ECOLOGO-registered in the US only.

2. Pixel 9 Pro XL is designed with approximately 67% recycled content across its plastic parts. This does not include plastics in printed circuit boards, labels, cables, connectors, electronic components and modules, optical components, electrostatic discharge (ESD) components, electromagnetic interference (EMI) components, films, coatings and adhesives.

3. Google defines its restrictions on harmful substances in the Google Restricted Substances Specification.

4. Carbon footprint reduction claim based on third-party verified life cycle assessment performed in 2024. Recycled aluminum is at least 12% of product based on weight.

5. Based on retail packaging (excluding adhesive materials and required plastic stickers) as shipped by Google. To meet the request of some retail partners, stickers and/or security tags are applied to some packaging variations and may contain plastic.

6. GHG emissions estimates are calculated in accordance with ISO 14040 and ISO 14044 requirements and guidelines for conducting life cycle assessments, and include the production, transportation, use, and recycling of the product, accessories, and packaging. GHG emissions estimates are for the 128 GB memory configuration.

7. Power measured with phone connected to cellular and WiFi networks in standby mode with fully charged battery and attached to the power adapter using the in-box USB-C cable. Tested in accordance with a modified version of the U.S. DOE Uniform Test Method for Measuring the Energy Consumption of Battery Chargers. Energy consumption patterns may vary when adaptive charging is enabled.

8. Based on average charging of previous generation devices. Actual energy consumption will vary by user.

9. The average residential cost of energy for U.S. households was $0.17 per kWh in April 2024 (Source: U.S. Energy Information Agency).

10. The average household cost of energy for consumers in the EU-27 was €0.29 per kWh in the second half of 2023 (Source: Eurostat Statistics Explained).

11. Product material masses are for the Pixel 9 Pro XL only, excluding packaging and accessories. For the U.S. configuration, an additional 27 g of electronic accessories are included in-box.

12. Recycled aluminum is at least 12% of product based on weight.

13. The recycled rare earth elements are a minimum of 27% of the magnet total weight.

14. Solder paste is made with multiple materials and contains at least 80% tin. The tin in the solder paste is made with 100% recycled content.

15. This recycled plastic accounts for at least 0.7% of the product based on product weight. This does not include plastics in printed circuit boards, labels, cables, connectors, electronic components and modules, optical components, electrostatic discharge (ESD) components, electromagnetic interference (EMI) components, films, coatings and adhesives.

16. Google continues to restrict arsenic content in glass, mercury in displays, and heavy metals (lead, cadmium, and mercury) in batteries as listed in Google's Restricted Substances Specification.

17. Compared to Pixel 8 and Pixel 8 Pro box packaging. Based on retail box packaging weight, volume reduction and absence of plastic (excluding adhesive materials and required plastic stickers) as shipped by Google. To meet the request of some retail partners, stickers and/or security tags are applied to some packaging variations and may contain plastic. Google defines responsibly sourced fibers as those derived from recycled content, FSC-certified suppliers, or reclaimed industrial residues (such as bagasse). Recyclability improvement based on fiber yield recovered certified by the Fibre Box Association voluntary standard.