iPad mini 2
Environmental Report

Date introduced
October 22, 2013

Environmental Status Report

iPad mini 2 is designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- Brominated flame retardant–free
- PVC-free
- Recyclable aluminum enclosure
- Power adapter that outperforms strictest global energy-efficiency standards

Meets ENERGY STAR® Version 6.1 requirements

Achieves a Gold rating from EPEAT[2]

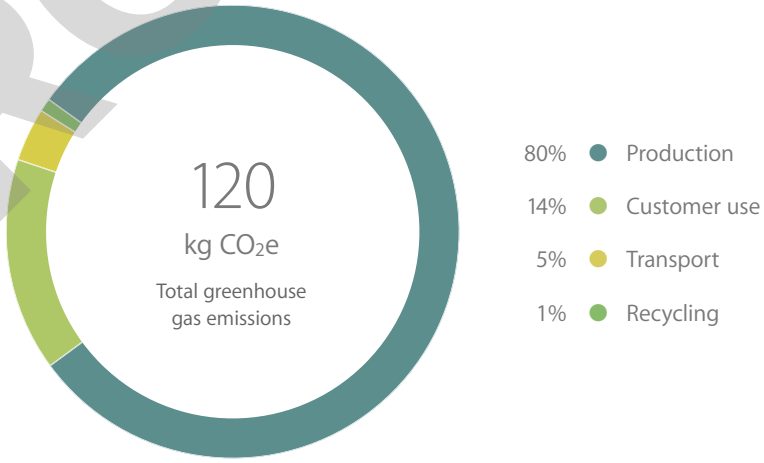
Apple and the Environment

Apple believes that improving the environmental performance of our business starts with our products. The careful environmental management of our products throughout their life cycles includes controlling the quantity and types of materials used in their manufacture, improving their energy efficiency, and designing them for better recyclability. The information below details the environmental performance of iPad mini 2 as it relates to climate change, energy efficiency, material efficiency, and restricted substances.[1]

Climate Change

Greenhouse gas emissions have an impact on the planet's balance of land, ocean, and air temperatures. Most of Apple's corporate greenhouse gas emissions come from the production, transport, use, and recycling of its products. Apple seeks to minimize greenhouse gas emissions by setting stringent design-related goals for material and energy efficiency. The chart below provides the estimated life-cycle greenhouse gas emissions for iPad mini 2.

Greenhouse Gas Emissions for iPad mini 2 (Wi-Fi + Cellular)



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Energy Efficiency

iPad mini 2 uses power-efficient components and software that intelligently manages power consumption. In addition, iPad mini 2 outperforms the stringent requirements of the ENERGY STAR Program Requirements for Computers Version 6.1. The following table details the power consumed by iPad mini 2 in different use modes.

At only 2.80W in idle with the display on, iPad mini 2 is extremely energy efficient. To put that in perspective, it takes more than four of these devices in idle with the display on to equal the power consumed by a single 13W compact fluorescent lightbulb.

Power Consumption for iPad mini 2 (Wi-Fi + Cellular)

Mode	100V	115V	230V
Sleep	0.17W	0.18W	0.18W
Idle—Display on	2.70W	2.69W	2.80W
Power adapter, no-load	0.09W	0.09W	0.09W
Power adapter efficiency	80.0%	81.0%	80.0%

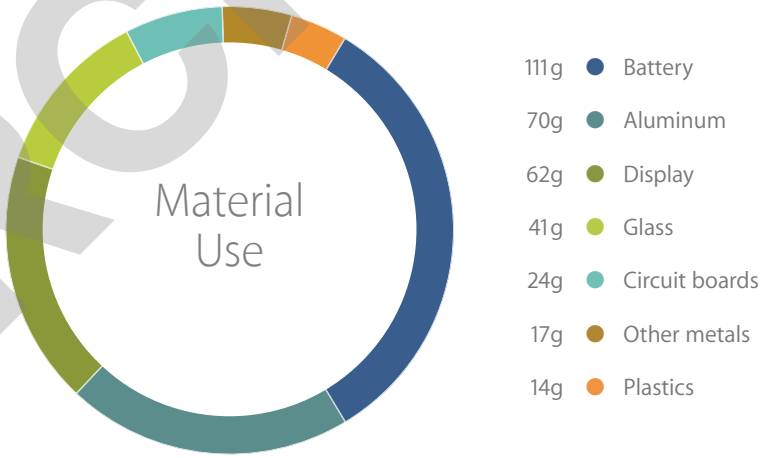
Material Efficiency

Battery chemistry

- Lithium-ion polymer, 24.3Whr
- Free of lead, cadmium, and mercury

Apple's ultracompact product and packaging designs lead the industry in material efficiency. Reducing the material footprint of a product helps maximize shipping efficiency. It also helps reduce the energy consumed during production, and material waste generated at the end of the product's life. iPad mini 2 is made of aluminum and other materials highly desired by recyclers. The chart below details the materials used for iPad mini 2.

Material Use for iPad mini 2 (Wi-Fi + Cellular)



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Retail packaging for iPad mini 2 uses a minimum of 38 percent post-consumer recycled content.

Packaging

The packaging for iPad mini 2 is highly recyclable. It uses corrugated cardboard made from a minimum of 38 percent post-consumer recycled content, and molded fiber made entirely from recycled content. The following table details the materials used in the packaging of iPad mini 2.

Packaging Breakdown for iPad mini 2 (U.S. Configurations)

Material	Retail box	Retail and shipping box
Paper (corrugate, molded fiber)	125g	326g
High-impact polystyrene	45g	45g
Other plastics	7g	7g

Restricted Substances

Apple has long taken a leadership role in restricting harmful substances from its products and packaging. As part of this strategy, all Apple products comply with the strict European Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, also known as the RoHS Directive. Examples of materials restricted by RoHS include lead, mercury, cadmium, hexavalent chromium, and the brominated flame retardants (BFRs) PBB and PBDE. iPad mini 2 goes even further than the requirements of the RoHS Directive by incorporating the following more aggressive restrictions:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- BFR-free
- PVC-free

Recycling

Through ultra-efficient design and the use of highly recyclable materials, Apple has minimized material waste at the product's end of life. In addition, Apple offers and participates in various product take-back and recycling programs in 99 percent of the regions where Apple products are sold. All products are processed in the country or region in which they are collected. For more information on how to take advantage of these programs, visit www.apple.com/recycling.

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Definitions

Greenhouse gas emissions: Estimated emissions are calculated in accordance with guidelines and requirements as specified by ISO 14040 and ISO 14044. Calculation includes emissions from the following life-cycle phases contributing to Global Warming Potential (GWP 100 years) in CO_2 equivalency factors (CO_2e):

- **Production:** Includes the extraction, production, and transportation of raw materials, as well as the manufacture, transport, and assembly of all parts and product packaging.
- **Transport:** Includes air and sea transportation of the finished product and its associated packaging from manufacturing site to regional distribution hubs. Transport of products from distribution hubs to end customer is modeled using average distances based on regional geography.
- **Use:** User power consumption assumes a three-year period. Product use scenarios are based on customer use scenarios. Geographic differences in the power grid mix have been accounted for at a regional level.
- **Recycling:** Includes transportation from collection hubs to recycling centers as well as the energy used in mechanical separation and shredding of parts.

Energy efficiency terms: The energy efficiency values in this report are based on the ENERGY STAR Program Requirements for Computers Version 6.1. For more information, visit www.energystar.gov.

- **Sleep:** Low power state that is entered automatically after 2 minutes of inactivity (default), or by pressing the Sleep/Wake button. Tested with a fully charged battery and powered by the 10W USB Power Adapter. Connected to Wi-Fi with Cellular Data off. All other settings were left in their default state.
- **Idle—Display on:** iPad mini 2 is on and at the Home screen. Tested with a fully charged battery and powered by the 10W USB Power Adapter. Display brightness was set as defined by ENERGY STAR Program Requirements for Computers Version 6.1, and Auto-Brightness was turned off. Connected to Wi-Fi with Cellular Data off. All other settings were left in their default state.
- **Power adapter, no-load:** Condition in which the 10W USB Power Adapter is connected to AC power, but not connected to iPad mini 2.
- **Power adapter efficiency:** Average of the 10W USB Power Adapter's measured efficiency when tested at 100 percent, 75 percent, 50 percent, and 25 percent of the power adapter's rated output current.

Restricted substances: Apple defines a material as BFR-free and PVC-free if it contains less than 900 parts per million (ppm) of bromine and of chlorine.

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1. Product evaluations based on U.S. configurations of iPad mini 2 (Wi-Fi + Cellular) with 32GB capacity.
2. iPad mini 2 achieved a Gold rating from EPEAT in the United States and Canada.

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