

ECOPROFILE

# Surface Laptop 4

13.5-inch display, metal palm rest



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### Our commitment to sustainability

At Microsoft Devices, sustainability is integral to our mission to build products that create magical experiences while empowering every person and organization to achieve more. From product design through sourcing, manufacturing, delivery, and product end-of-life, we are driven to make a difference with our products both in how our customers create with them and in the impact their development has on our environment.

### Physical features

#### DEVICE

Weight <sup>1</sup>	1,288g
Dimensions	30.8 cm x 22.3 cm x 1.5 cm

PACKAGING	RETAIL	COMMERCIAL
Weight	866 g	591g
Dimensions	34.0 cm x 25.3 cm x 5.3 cm	39.5 cm x 29.1 cm x 5.5 cm
Volume	4496 cm <sup>3</sup>	6322 cm <sup>3</sup>
Materials	Folding carton, corrugated paper board, molded pulp, plastic	

### Labels and certifications



Meets  
ENERGY  
STAR® 8.0



EPEAT®  
Gold  
registered  
in the U.S.  
and Canada

# Environmental impact

Greenhouse gas emissions	165 kg CO <sub>2</sub> -equivalent
Energy use from non-renewable resources	2124 MJ

These figures represent the estimated environmental impact<sup>2</sup> across the product's life cycle. The calculations are based on the Intel Core i5, 16 GB DRAM, 512 GB SSD configuration of 13.5" Laptop 4 with metal palm rest, and include the main device, power supply unit, and packaging. Other accessories are not included. The annual estimated total energy consumption (ETEC) is 11.5 kWh.

The greenhouse gas emissions and energy use figures are based on a Life Cycle Assessment (LCA) in accordance with ISO 14040 and ISO 14044 complemented by device-specific ETSI TS 199 and ITU-T L 1410. The Life Cycle Inventory (LCI) data is based on our own measurements, collected from suppliers, and internationally available LCI databases.

The system boundaries include manufacturing (extraction of raw materials, upstream materials preparation, electronic component manufacturing, subassembly manufacturing and assembly, and final assembly), distribution to customer, three years of product use, and end-of-life treatment.

Software and hardware design impacts are captured in our corporate carbon footprint and excluded from the individual product LCA calculations.



Manufacturing



Transport

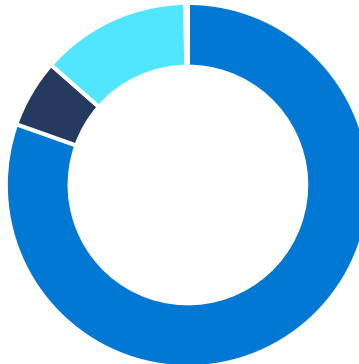


Product use



Disposal

- Manufacturing (133 kg CO<sub>2</sub>q)
- Transport (10 kg CO<sub>2</sub>e)
- Product use (22 kg CO<sub>2</sub>e)
- End of life (<1 kg CO<sub>2</sub>e)



Find out more about the environmental impact of our products at:

[Designing Sustainable Products](#)

# Energy efficiency

This device meets the requirements of the ENERGY STAR Computer Specification Version 8.0 and EU Commission Regulation for Standby and Off Mode Power Consumption for Electronic Household and Office Equipment 1275/2008.

The power supply meets European Union Ecodesign Directive for Energy Related Products 2009/125/EC (ErP Directive) and Ecodesign regulation for external power supply (EC) No 278/2009.



**11.5 kW<sup>5</sup>**

**14.3 kW<sup>6</sup>**

ENERGY STAR estimated annual energy consumption<sup>7</sup>

INPUT MODE <sup>5</sup>	115 V	230 V
Off	0.3 W	0.3 W
Sleep	0.6 W	0.5 W
Idle	3.3 W	3.5 W

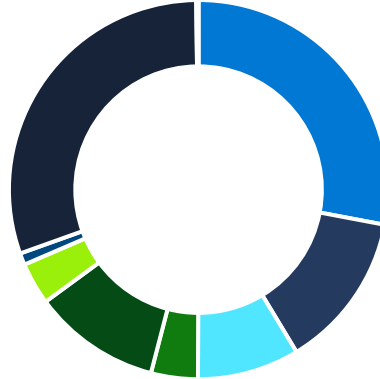
Find out more about energy efficiency at:

[Improving Energy Efficiency](#)

## Materials used

Through careful material selection we aim to reduce the environmental impact of our products. The chart shows the estimated proportions of the materials used to create this device.

- Metal (28%)
- Power Supply (13.4%)
- Battery (8.7%)
- Circuit Boards (4%)
- Display (10.9%)
- Plastic (3.6%)
- Glass (1%)
- Retail Packaging (30.3%)
- Other (<1%)



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Find out more about the materials used to create our products at:

[Sustainable Materials and Approach](#)

## Restricted substances

We take a precautionary approach to substance management. We follow legislative developments and research regarding chemical impacts on health and environment and update our specifications with new product and manufacturing substance restrictions to address risks.

All our products comply with global substance restrictions and with Microsoft policies in cases where restrictions are set that go beyond the regulatory requirement.

This product fully complies with all relevant global regulations, including, but not limited to:

- ✓ The European Union's Restriction of Hazardous Substances Directive (RoHS) Directive 2002/95/EC as amended by the RoHS Recast Directive 2011/65/EU
- ✓ Management Methods on the Prevention and Control of Pollution caused by Electronic Information Products commonly known as "China RoHS"
- ✓ European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation 2006/1907/EC
- ✓ The Montreal Protocol on Substances that Deplete the Ozone Layer
- ✓ California (USA) Proposition 65 (Device does not contain chemicals that would trigger notification)
- ✓ European Union Battery Directive 2006/66/EC

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Find out more about our Restricted Substance List at:

[Sustainable Materials and Approach](#)

# Packaging

Integrating sustainability into our packaging designs and material selection is a priority. We improve the sustainability of our packaging by using less material, selecting more sustainable materials, and optimizing manufacturing processes. We are committed to designing and delivering packaging materials that achieve measurable sustainability gains while ensuring products are adequately protected.

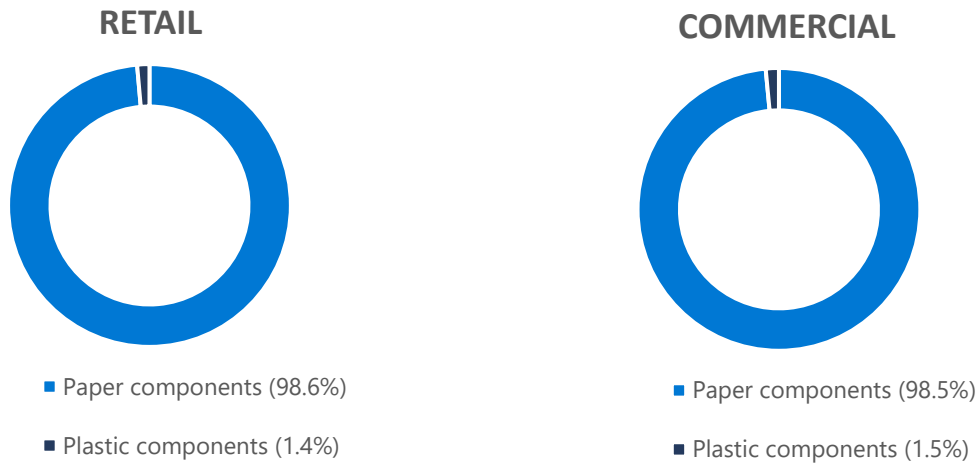
Microsoft has a “paper first” strategy for our packaging. We favor paper as a packaging material because it is renewable, biodegradable and highly recycled. We are focused on minimizing the use of plastics in our packaging. When required, we strive to use plastics with recycled content and resins that are accepted for use in recycling systems. The retail paper packaging materials for this product contains 70 percent post-consumer recycled materials and it is 95 percent recyclable by weight.<sup>3</sup>

In FY19, we launched the first wave of packaging specially designed for the commercial channel. This packaging uses less materials and has a higher percent of recycled content, which reduces the environmental impacts when compared to retail packaging as shown below. More products will be offered in commercial packaging in the future.

Find out more about our packaging at:

[Approach to Product Packaging](#)

	WEIGHT	POST-CONSUMER RECYCLED CONTENT IN PAPER
Commercial Packaging	32% lighter <sup>4</sup>	14% increase <sup>4</sup>



Our packaging does not contain hazardous or restricted substances, such as polyvinyl chloride (PVC), and is fully compliant with the European Union Packaging and Packaging Waste Directive 1994/62/EC, as amended, and CEN packaging standards EN 13427:2005 as well as US Toxics in Packaging legislation.

# Recycling

Microsoft complies with global electronics recycling laws, including the EU Waste Electronic and Electrical Equipment (WEEE) Directive 2002/96/EC and its Recast 2012/19/EU and other recycling laws in Asia, Latin America and North America. We fulfill recycling obligations and meet information and labelling requirements for covered Microsoft products.



The crossed-out wheeled bin symbol marked on this product signifies that it must not be disposed of with regular household waste and needs to be taken instead to an appropriate collection point.

To help prevent uncontrolled waste disposal and promote the recycling or recovery of materials, always return your used electronic products, batteries, and packaging materials to a dedicated recycling or recovery collection point, if available in your area.

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Check how to recycle your products at:

[Approach to Product Recycling](#)

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Download the Microsoft Sustainability Report:

[Devices Sustainability at Microsoft](#)

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1 Weight of device only, not including power supply unit or any accessories. Weight and dimensions might vary depending on product variant.

2 The results of a life cycle assessment (LCA) depend on the calculation method, scoping and assumptions used, and they reflect our understanding at the time when published. We update our LCAs periodically, as improvements are made to the models, internationally available LCI databases, and data we collect. In addition, materials or processes used may change. The results are therefore not directly comparable with those conducted at other times or by other parties.

3 Percent is on average by weight. Recycling facilities for these packaging materials may not exist in your area.

4 Compared to retail packaging.

5 Applies to configuration with Intel processor.

6 Applies to configuration with AMD processor

7 Configuration: 115 V 60 Hz