



# Product Environmental Report

2022

December 2022

## Progress toward our 2030 goal

40% of manufacturing facilities are powered by renewable energy. Over 20% of manufacturing facilities are powered by 100% renewable energy.

## Responsible Sourcing

100% of our wood and wood products are sourced from responsible sources. 96% of our suppliers are certified to responsible sourcing standards.

## Responsible Manufacturing

100% of our manufacturing facilities are certified to the Responsible Sourcing Code of Conduct. 100% of our manufacturing facilities are certified to the Responsible Manufacturing Code of Conduct.



## Smarter chemistry

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

## Log it

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

## Recycle it

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

Apple is the first product to use certified recycled steel in the battery tray.

Apple is committed to reducing its environmental impact. Apple is committed to reducing its environmental impact.



# Our product carbon neutrality strategy

We go forward and reduce our carbon footprint by 23% during our 2023-2025 period. Our goal is to reach net-zero emissions by 2030. We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint.

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also continue to invest in research and development to create new products that are more sustainable.

## How we're reducing emissions

- **Transition to 100 percent clean electricity for manufacturing:** We are transitioning our manufacturing operations to 100% clean electricity by 2025. This will be achieved through a combination of renewable energy sources and energy efficiency improvements.
- **Transition to 100 percent clean electricity for product use:** We are transitioning our product use to 100% clean electricity by 2025. This will be achieved through a combination of renewable energy sources and energy efficiency improvements.
- **Prioritize non-air transportation:** We are prioritizing non-air transportation for our employees and customers. This includes walking, biking, and using public transit.
- **Use recycled and low-carbon materials:** We are using recycled and low-carbon materials in our products. This includes recycled plastic, recycled paper, and low-carbon concrete.

## How we'll get to net zero emissions

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also continue to invest in research and development to create new products that are more sustainable.

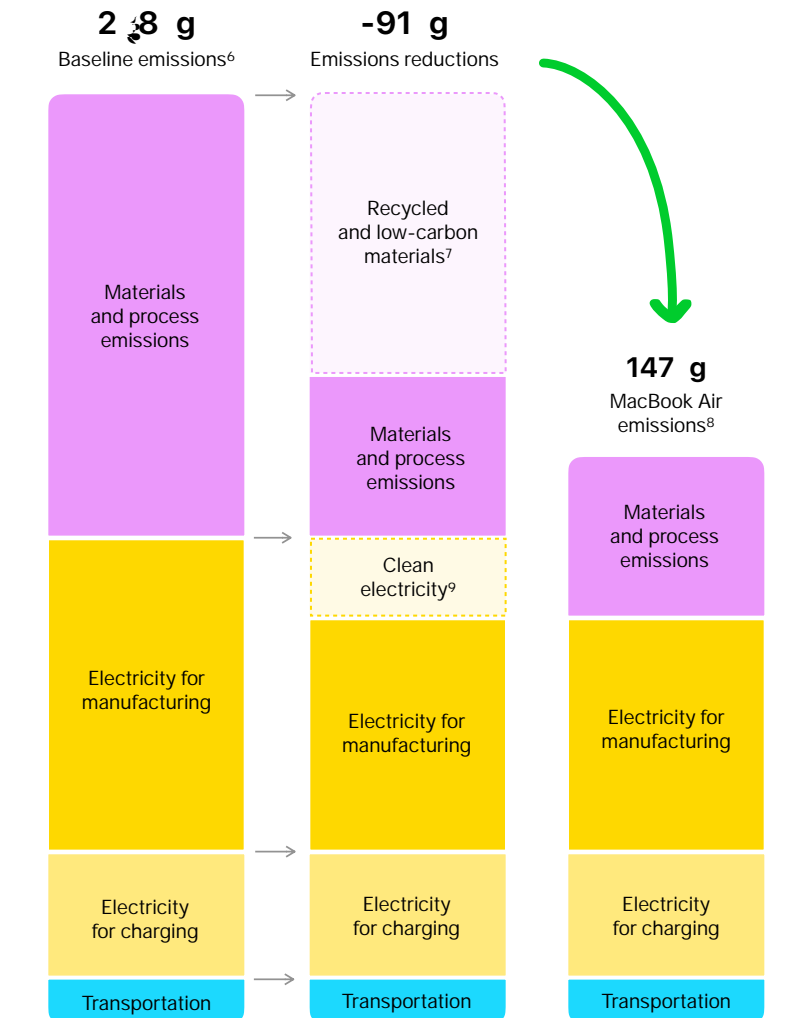
## How we're monitoring progress

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also continue to invest in research and development to create new products that are more sustainable.

- No use of air conditioning or other energy-intensive equipment in our offices.
- 100% of our energy consumption is from renewable sources.
- 100% of our products are made from recycled and low-carbon materials.

# Progress to hard carbon footprint neutral

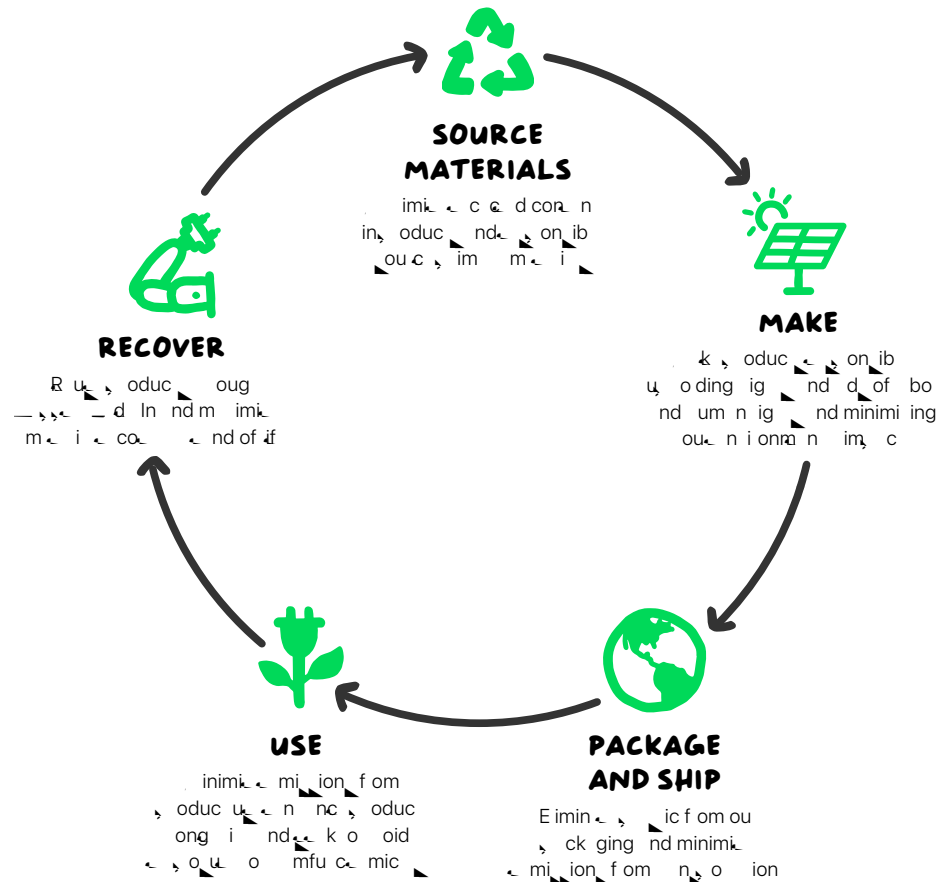
We reduced emissions for MacBook Air by 20% by 2020, and by 38% by 2022. We are on track to reach our goal of 50% by 2025. We are also working with our suppliers to reduce emissions from their production. We are committed to reducing our carbon footprint and achieving net-zero emissions by 2030.



# Taking responsibility for our products at every stage

We take responsibility for our products throughout their lifecycle—including the materials we use, the way we source them, how we make them, how we package and ship them, how we use them, and how we recover them. We work to make big differences for our products by reducing our impact on the environment, our communities, and our planet.

We sell millions of products. So making even small adjustments can have a meaningful impact.





# Source materials

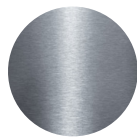
... cook i wi ... 2 c i con in 4 ... c n c e d o ... n w b e con n.1

... con ... im o n e ou c w w o k o d u c e m e i w u e nd im o o a d ... ou c on e c e d o e n w b e m e i in ou s o d u c ... nd w m k i n i o n w ... m in commi d o e e ... on i l a ou c i n g of, im m e i . W m s m n m e i ... o r a o e m i n o u c n d b i e i e ... nd d f o r a e n d e f i a ... o e q u i 1 ... c n of i d n i f i d i n n u m u n g e n g o d c o b n d i u m ... n d e f i a o s i c i e i n i d s u d i .<sup>10</sup> W e s o u d o b e c o g n i d w o d w i d ... d i n e e ... on i l a ou c i n g of m i n i n o u s o d u c . u s o d u c d i g n o c o n i d ... e f o f o w o m k u e n d e c e o u s o d u c e i c i n g e u e of u n d d of ... m f u u b n c . u n d d g o b o n d w ' e q u i d b w o s a e c e e n d ... e n i o n r a n .



## Rare earth elements

W u 1 ... c n e c e d e e ... r a n i n m g a ... n i n g ... 8 ... c n of e o ... e e r a n ... i n e d i c .



## Steel

W u 2 ... c n e c e d e e i n e ... b e ... - f i f o ... .



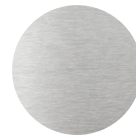
## Ti

W u 1 ... c n e c e d i n i n e o d ... of e m i n o g i c b o d .



## Elastomer

W e n i o n i n g f o m f o i f u - b e d ... i c o o m d f o m e n w b ... o e c e d o u c . o c c o o k i ... w i 2 c i w u 3 ... c n o m a ... c e d s i c i n 1 c o m p o a n .



## Aluminum

... e e d n u m i n u m o m d of 1 ... c n e c e d u m i n u m w i c w u e f o ... e n c o u e of c o o k i w i 2 c i .<sup>11</sup> ... i o d i e ... r a e n g d u b i i ... n d f w ... f i n i - w i o u m i n i n g n a w ... b u i ( u m i n u m e ) f o m e e .



## Smarter chemistry

... c o o k i w i 2 c i i f e of m f u u b n c i k b i u m b o m i n e d f r a e d n ... C s ... e n i c i n e d i s g ... n d r a c u 3 n d 1 ... c n of e m e i i n ... c o o k i w i 2 c i e c o e d b o u R g u e d S u b n c S e c i f i c i o n . W g o b o n d ... w ' e q u i d b i m i n g o u n d ... n d e n o n e g u e d u b n c i r e s of e ... s o d u c - r e f f o e q u i n i n d u e d i n g e of n e n c o u g e e n i u s ... c i n . W c o n i e n i d n i f e m k u of a 7 ... c n b m of c d i c .



## Value

Our Supplier Code of Conduct is a key element of our commitment to ethical and responsible business practices. It sets out the standards we expect of our suppliers and partners, covering areas such as human rights, labor practices, environmental protection, and anti-corruption. We believe that ethical and responsible business practices are essential for long-term success and sustainable growth.

We work closely with our suppliers to identify and address any areas of concern. We provide training and support to help our suppliers understand and meet the requirements of our Code of Conduct. We also conduct regular audits to ensure compliance. For more information, please visit [www.3m.com/suppliercodeofconduct](http://www.3m.com/suppliercodeofconduct).

### Reduce Chemicals

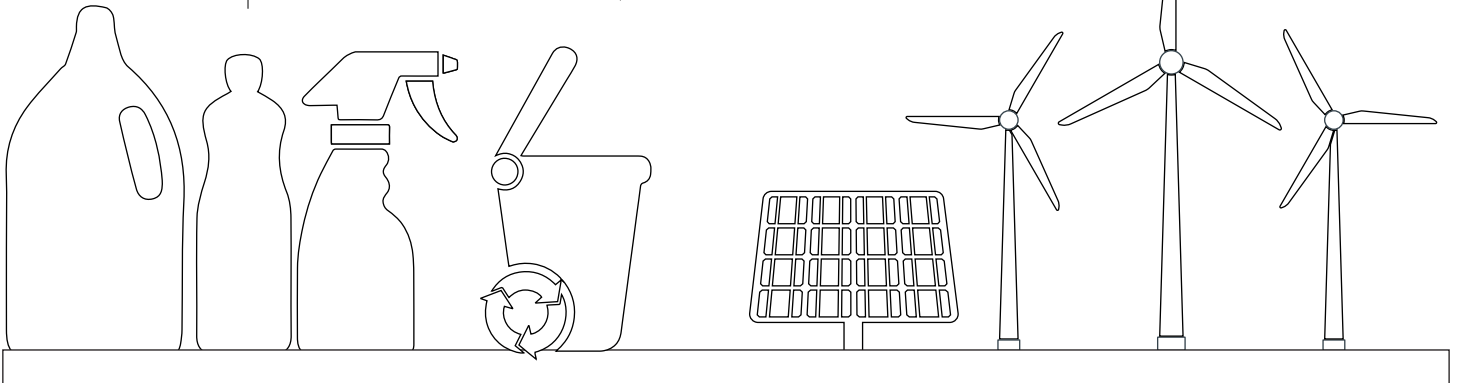
Our commitment to reducing chemicals is a key part of our environmental strategy. We are working to eliminate the use of hazardous substances and reduce the overall volume of chemicals used in our products and processes. This helps to minimize the risk of environmental contamination and protect the health and safety of our employees and the community.

### Zero Waste to Landfill

Our goal is to achieve zero waste to landfill by 2025. This means that all waste generated in our operations will be recycled, reused, or otherwise managed in an environmentally responsible way. We are investing in new technologies and processes to improve our waste management practices and reduce our environmental footprint.

### Sustainable Energy Use

Our commitment to sustainable energy use is a key part of our environmental strategy. We are working to increase the use of renewable energy sources, such as wind and solar, to power our operations. This helps to reduce our greenhouse gas emissions and our dependence on fossil fuels. We are also investing in energy-efficient technologies to reduce our energy consumption and costs.





# ac age a d Shi

ac age a d Shi 2 c i s ck ging i m d wi 1 c n  
 c e d cor n on ib ou c d wood fib .

o im, a ou, ck ging w e wo king e imin e s ic in e c e d cor n nd  
 u e s ck ging a of e wood fib in ou, ck ging i e c e d o cor n  
 f om e s on ib m n g d fa .<sup>14</sup> nd w e s e e d o e e d noug e s on ib  
 m n g d fa o ca e i gin wood fib w u e in ou, ck ging.<sup>15</sup> i e n u  
 wo king fa e b e o g ow nd con inu o e n ou i nd, u if ou w e .

— w n s o ou, oduc f om ou m nuf c u o ou con um w e s io i i ing  
 c bon-in n k i s ing mod n i n s o uc i nd oc n.

## 95%

of e s ck ging<sup>16</sup>  
 i fib -b e d du o  
 ou wo k e imin e  
 s ic in s ck ging

## 45%

e c e d cor n in  
 fib s ck ging

## 10%

of e i gin wood  
 fib in e s ck ging  
 com f om e s on ib  
 m n g d fa .<sup>14</sup>





# Use

... cook i wi ... 2 c i u ... 7 ... c n ... a g ... n ...  
 ... qui m n fo ENERGY S...R.17

W d ignou, oduc ob a g e f f i a i n o n g - i n g n d f . c o o k i w i . 2 c i  
 u ... of w e n d , o w e f f i a i n c o m , o a n ... i r i g n m n g , o w c o n u m , i o n .  
 W o u n o u o w n R i b i i n d E n i o n r a n ... i n g b w e o u , o d u c g o u g  
 i g o u e ... i n g b f a e e e o u d o o . u u , o c o n i n u ... o u g o u e c , o d u c '  
 i f c e w i e g u ... of w e u d e ... o k e , d i c c u e n n d a w o k o f u o i d  
 e , i , q f i o n ... o ... i c e m i f a c ... . o d d ... m i , i o n , i d o e e e c i c i o u  
 , o d u c u w e b u i l d i n g e r a a g , a j c n d n g g i n g w i o u c u o m ... o  
 e d u c e n d , o i d a , o u n i k i ... o u , o e d c b o n i i o n o f e g i d .

## Ei erg col sum tio, of ENER Y S T R-rated roducts

... d i c c o n j e n n k m o n g e i g ... f o m i n g , o d u c e d b ENER Y S \_ R  
 w i c e ... c i f i c i o n ... , i c e f c e 2 ... c n m o e a g e f f i a i n d i c o n  
 e m k ... c o o k i w i . 2 c i c o n u m ... 7 ... c n ... a g ... n ... e q u i m n  
 fo ENERGY S...R.17

## esig, ed to last

e n u du b i i w ... d  
 ... c o o k i w i . 2 c i i n o u  
 R i b i i ... i n g b u i n g i g o u  
 ... i n g m o d ... i m u e  
 c u o m ... e i n c .

## ade ith smarter chemistr

W ... i g o u c o n o f o  
 m e i u e o u c - b e d  
 o n e c o m m a n d i o n f o m  
 o i c o o g i ... n d d m o o g i .





# Recover

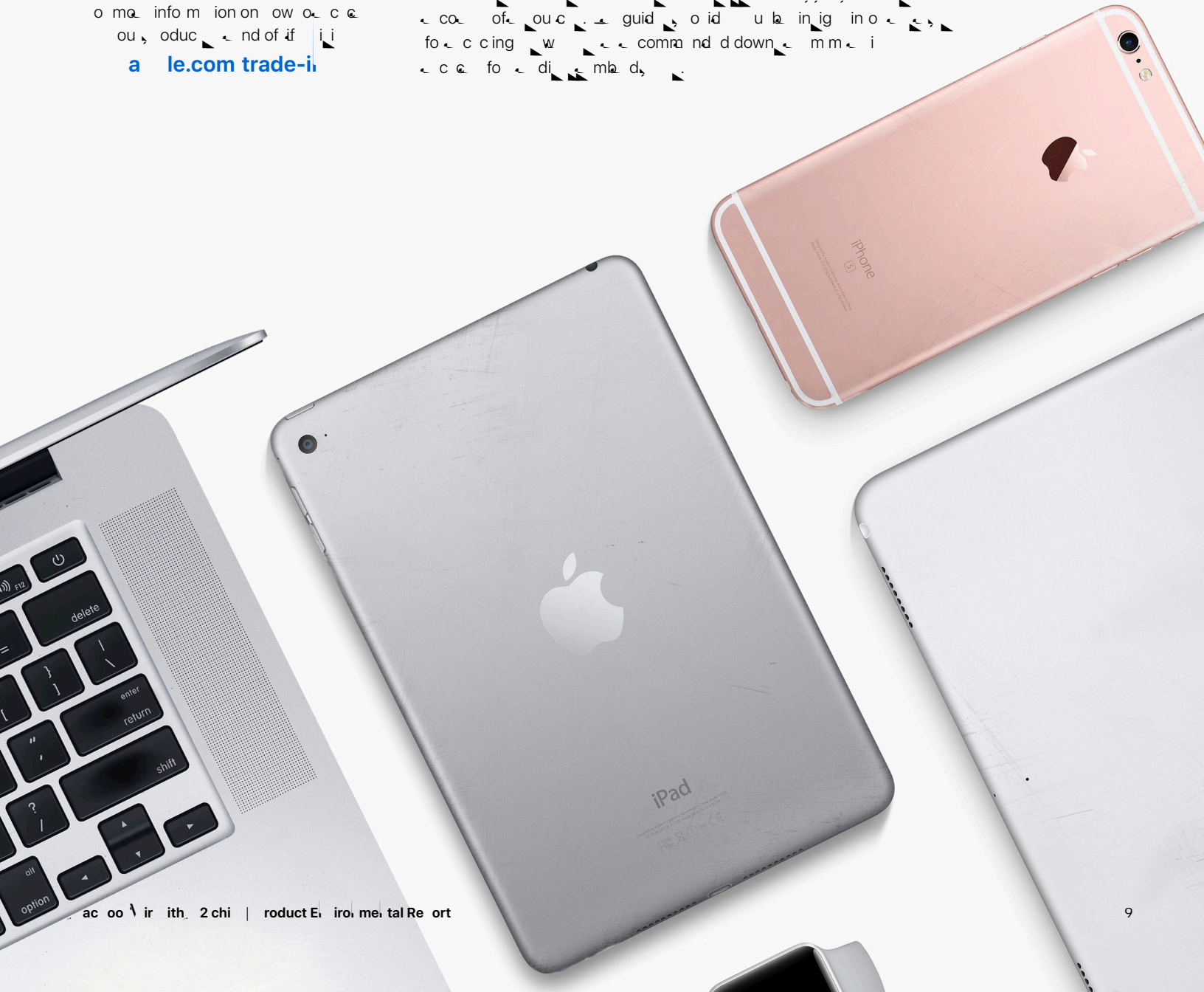
Run our product with us and in new ways, using our recycling technology.

When you use our products, we help you get the most out of them. We work with you to ensure that your products are recycled properly. For example, we can help you with the recycling process. We can also help you with the recycling process. We can also help you with the recycling process.

## The Trade In

Our information on how to recycle your products and of if you can trade in your products at [apple.com/trade-in](http://apple.com/trade-in).

With our new [Recycling Guide](#), you can find out how to recycle your products and of if you can trade in your products at [apple.com/trade-in](http://apple.com/trade-in).



# Definition

**Bio-based plastics** Bio-based plastics are made from biological sources and can be used for a wide range of applications. Bio-based plastics are made from renewable resources and can be used for a wide range of applications.

**Carbon footprint** The carbon footprint of a product is the total amount of greenhouse gases (GHG) emitted during its production, use, and disposal. The carbon footprint of a product is the total amount of greenhouse gases (GHG) emitted during its production, use, and disposal.

**Reduction** Reduction is the process of decreasing the amount of waste or emissions. Reduction is the process of decreasing the amount of waste or emissions.

**Traceability** Traceability is the ability to track the origin and movement of a product. Traceability is the ability to track the origin and movement of a product.

**Use** Use is the process of utilizing a product. Use is the process of utilizing a product.

**End-of-life process** End-of-life process is the process of disposing of a product. End-of-life process is the process of disposing of a product.

For more information on our bio-based plastics, visit [www.bonfoos.com/en/onrn/nw](http://www.bonfoos.com/en/onrn/nw).

**Low-carbon materials** Low-carbon materials are materials that have a low carbon footprint. Low-carbon materials are materials that have a low carbon footprint.

**Recycled materials** Recycled materials are materials that have been recycled. Recycled materials are materials that have been recycled.

**Renewable materials** Renewable materials are materials that can be replenished. Renewable materials are materials that can be replenished.

**Supplier Clean Energy Program** The Supplier Clean Energy Program is a program that encourages suppliers to use clean energy. The Supplier Clean Energy Program is a program that encourages suppliers to use clean energy.

# Carbon Footprint

Greenhouse gas emissions were calculated during the production of the product in accordance with ISO 14047 and ISO 14044 and based on the data provided in the 2023 Product Environmental Footprint (PEF) report. The data is based on the 2023 Product Environmental Footprint (PEF) report. The data is based on the 2023 Product Environmental Footprint (PEF) report.

Product	Carbon Footprint (kg CO <sub>2</sub> e)
Product A	147
Product B	171

Not including the following items:

Waste generated during production of the product in different configurations

Configuration	Carbon Footprint (kg CO <sub>2</sub> e)
Configuration 1	147
Configuration 2	171

# Et dnotes

1 oduc e e do e a w la cor n i e m of c ifi d e e d m e i e k o e a m of e d ic no incuding, ck ging o in-bo cc ai

2 We im e e e c n o e c i c i e e d m i j o n i n o u m n u f c u i n g i j o u c d f o m e a e c i c i b i b u i n g o o u c b o n m o d e a e a g s o c u d b o u u s j i i n e s i o f i c e b e d o n e u s j i m n u f c u i n g o c i o n i r a o f s o d u c u n c . I n c u d d i n i j u m b j o n e a e c i c i u s e o i u s j i e s o c u d s a f s s e ' S u s j i G e n E a g o g m .

3 s s e ' R g u e d S u b n c S x c i f i c i o n d c i b s s e ' e i c i o n e u o f c i n a m i c u b n c i n m e i i n s s e s o d u c c c a i m n u f c u i n g s o c e n d s c k g i n g u e d f o i s i n g s o d u c o u s s e ' e n d c u o r a R i c i o n e d k d f o m i r a n i o n w o d i c i e g u o g n e i e c o b e q u i r a n e n i o n r a n n d d n d s s e s o i a i . E e u s s e ' o d u c i e e o f C n d s e e c s f a C s o w c o d i n d i i n d f o 2 s o n g C s o w c o d j ) n d S o u s a e w e w c o n i n u o e k g o e n a n s s o f o o u C n d s e e s c r a n s s e s o d u c c o m w i e E u o e n U n i o n D i c k 2 1 1 6 . / E U n d i r a n d r a n i n c u d i n g e m j o n f o e u o f d u c i g e m e u o d . u s e i w o k i n g o s e o u e u o f e e e m e d u b n c f o a w s o d u c w e e c n i c s o i l e .

4 c o o k i w i 2 c i c i e d G o d i n g i n e U n i d S e n d C n d i n c c o d n c w i I E E E 1 0 8 . 1 o U 1 1 n d i j e d u c o n e E c o n i c o d u c E n i o n r a n u e r a n o o E E J R g i . E E e g i e c o m u d i s n d m o b i s o a b e d o r a n i o n r a n e q u i r a n i n e e n d d . o m a i n f o m i o n i j i w w w . e . a .

W e c o g n i t e e n e n o u c o f e c i c i e e i d u c b o r m i j o n c o e i i f c e e . g . f o m m n u f c u i n g ) w i c w c c o u f o w e n e c u i n g o u s o d u c c a e 3 m i j o n .

6 C b o n e d u c i o n e c c u e d g i n b e i a c n i o 1) N o u o f e a e c i c i f o m n u f c u i n g o s o d u c u b o n d w i e d i l a o n e g i d b e d o n e g i o n e m i j o n f c o . 2) s s e ' c b o n i r a n j i o f k m e i o f 2 1 . o u b e i a e f o u 2 3 s o d u c c b o n a u i g o . C b o n i r a n j i o f m e i e f c u e o f c e d c o r a n n d s o d u c i o n e c n o o g . 3) s s e ' e g m i o f n s o i o n m o d i i o c n u c k i n g ) b s o d u c i a c o e e e f i c e e 2 1 7 o 2 1 6 ) o b c s u e b e i a n s o i o r m i j o n o f o u s o d u c .

7 W c c u e e m i j o n i n g f o m e u o f c e d o o w c b o n m e i i n o u s o d u c b c o m i n g e c b o n i r a n j i o f k m e i o 2 1 . b e i a . W c u e n o n q u n i f e c b o n i n g f o m e u o f e c e d u m i n u m w i c r a n e c u e m i j o n o i d d e i k g . W s n o i m a o u c c o u n i n g o f e c e d c o r a n a i r a .

8 G e n o u g e m i j o n w e c c u e d u i n g i f c e e r a n r a o d o o g i n c c o d n c w i I S 1 4 4 n d 1 4 4 4 n d d n d b e d o n . c o o k i w i 2 c i n d 2 0 G o g .

9 W e i m e e m i j o n i n g f o m u s j i e a w l a e e c i c i b o c i n g o o u c b o n m o d e a e c i c i g a e d b o u u s j i i n e s i o f i c e b e d o n e u s j i m n u f c u i n g o c i o n i r a o f s o d u c u n c .

1 W m s m e i i n o u u s c i n d s u b i j i o f i d n i f i d i n n u m u n g e n n d g o d 8 G ) c o b n d i i u m r a e n d e f i a i n o u u s c i n . i d s e r a n e k o c o n f i m o u c i n g s c i c n d e s o f o u e o n i l a o u c i n g s o g m . I n d d i o n o u e f f o c o n i d b o d n g o f i k i n c u d i n g o c i e n i o n r a n u m n i g n d g a n n e i k .

11 R e d m e i c i m s s j i o e e n c o u .

12 C e m i c r e G e n S a e n @ b n c m k 3 o 4 o o e e q u i e n r a o d o o g i k U S . E . S f C o i c e c o n i d e d e f n d s e f e d f o u . G e n S a e n @ j c o m e e n k d e r a n o o e u e u b n c g i n 1 8 d i f f e n c i i . o m a i n f o m i o n i j i w w w . g e n a e n c e m i c o . g .

13 e b j e d f i n e m b u s j i i o o e e b e n s s e u s j i f o m a n o a e f o c o o k i w i 2 c i e i d s e i f i d e o W e b U C 2 7 0 0 S n d d ) . U e q u i e e c n d e i o n o u g r a o d o e n w e e a g o c i e e o W e o n d f i i e e 0 4 e c n G o d 0 0 e c n n d i n u m 1 e c n ) d i g n i o n .

14 R o n i l a o u c i n g o f w o o d f i b i d f i a d i n s s e ' S u i n l e i b S x c i f i c i o n .

1 o m a i n f o m i o n b o u o u w o k o s a e c n d a e e s o n i b m n g d f a s s e e e d o u E n i o n r a n o g . R s o .

16 e k d o w n o f U . S e i s c k g i n g b w i g d e k i n k n d c o i n g e e c u d d f o m o u c c u i o n o f s i c c o r a n n d s c k g i n g w i g .

# Ednotes

<sup>17</sup> Energy consumption and efficiency under the bed on ENERGY STAR and MRL requirements for Commercial including the following for cook i w i 2 c i . o m a i n f o m i o n i j i [www.aga.gov](http://www.aga.gov). ENERGY STAR and ENERGY STAR kitchen and kitchen o w a d b e U.S. En i o n r a n a c i o n g n c .

cook i w i 2 c i i e d w i f u c g d b e n d , o w e d b e 3 W U S - C o w d s e w i e U S - C o g S f 3 C b 2 m ) .

- ff ow s ow mod of e m . S e m i u down.
- S e s ow, ow e i e r e d u o m i c f 1 m i n u e o f i n c i i d f u ) o b e c i n g s e , f o m e s e r a n u . W k f o a w o k c c e n b d .
- I d - D i e o n S e m i o n n d c o m e d o d i n g m c S . D i e b i g a w e d f i a d b ENERGY STAR and MRL requirements for Commercial and u o - i g a w u a d o f f . C o n a e d o W i - i .
- ow d s e n o - o d C o n d i o n i n w i c e 3 W U S - C o w d s e w i e U S - C o g S f 3 C b 2 m ) i c o n a e d a C s o w b u n o c o n a e d o e m .
- ow d s e e f f i c i e n c e g o f e 3 W U S - C o w d s e w i e U S - C o g S f 3 C b 2 m ) r a u d f f i c i e n c e n e d 1 e c n 7 e c n e c n n d 2 e c n o f e s o w d s e e d o u s u c u e n .

Mode	Power consumption for ac power with 2 chi		
	115V	115V	230V
ff	.13W	.13W	.13W
S e s	.27W	.27W	.27W
I d - D i e o n	3.9W	3.14W	3.18W
ow d s e n o o d	.7W	.7W	.8W
ow d s e e f f i c i e n c e	88.8	89.1	88.8

<sup>18</sup> d - i n u b e d o n e c o n d i o n e n d c o n f i g u r a t i o n o f o u d - i n d i c n d m o b w e n o n i a n d i n - a d - i n . Y o u m u b e 18 e o d . I n - a d - i n e q u i s e n i o n o f i d g o e n r a n - i u d s o o I D p o c w m e q u i n g i i n f o m i o n ) d d i o n e m f o m s e a s e d - i n , a m s s .

© 2023, Inc. ig e e d s e e o g a s e s s e W c H o m o d i d i d S i o a c c o o k i e c o g o m c S S n d w o S e d m k o f s e e I n c . e g e e d i n e U . S . n d o e c o u n j n d e g i o n c o o k i w i 2 c i i e d m k o f s e e I n c . s e a i e i c m k o f s e e I n c . e g e e d i n e U . S . n d o e c o u n j n d e g i o n . I S i e d m k o e g e e d d m k o f C i c o i n e U . S . n d o e c o u n j n d i u d u n d i c n e . ENERGY STAR e ENERGY STAR k e e g e e d d m k o w a d b e U . S . E n i o n r a n a c i o n g n c . e s o d u c n d c o m n n r a n i o a d e e i n m b e d m k o f e i e c k c o m s a i e .