

Corporate Carbon Footprint 2020

Successful in climate action
Multipak Ambalaj ve Gıda Sanayi Tic. A.Ş.

Overview

ClimatePartner GmbH (ClimatePartner) has calculated the Corporate Carbon Footprint (CCF) for Multipak Ambalaj ve Gıda Sanayi Tic. A.Ş. (Multipak) for 2020 based on the standards defined in the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

The Corporate Carbon Footprint is an important component for the development of a climate action strategy. By analyzing the carbon footprint, it is possible to identify reduction potentials, develop appropriate measures and define climate action goals.

This report provides an overview of the calculated emissions for the company’s business activities in 2020.

Overall result (t CO ₂)	
2020	7,967.18

The amount corresponds to ...



... a distance of

24,742,952

km driven with a passenger car



... the yearly carbon footprint of

948

European citizens



... the yearly carbon sequestration of

637,375

beech trees

Carbon footprint 2020

The company’s business activities generated a total of 7,967.2 t CO₂.

63.5 t CO₂ (0.8 %) are direct emissions (Scope 1). Indirect emissions from purchased energy (Scope 2) amount to 1,122.9 t CO₂ (14.1 %). Other indirect emissions (Scope 3) generated 6,780.8 t CO₂ (85.1 %).

The largest source of emissions is production materials and consumables (44.3 %). The second largest item is waste treatment (products) at 23.6 %. In third place are emissions from electricity with 14.1 %.

Below is an overview of the Corporate Carbon Footprint.

Table 1: Corporate Carbon Footprint 2020 for Multipak

Emission source		t CO ₂	%
Scope 1	Cooling agents	41.4	0.5
	Vehicle fleet	22.2	0.3
<i>Subtotal Scope 1</i>		<i>63.5</i>	<i>0.8</i>
Scope 2	Electricity	1,122.9	14.1
<i>Subtotal Scope 2</i>		<i>1,122.9</i>	<i>14.1</i>
Scope 3	Production materials and consumables	3,526.2	44.3
	End of life (products)	1,880.4	23.6
	Other printing raw materials	532.1	6.7
	Packaging materials	470.8	5.9
	Outbound logistics	118.1	1.5
	Upstream emissions of electricity	94.5	1.2
	Inbound logistics	78.3	1.0
	External service providers	63.6	0.8
	Flights	11.4	0.1
	Upstream emissions of fuel	3.4	0.0
	Waste treatment	0.9	0.0
	Office paper	0.8	0.0
	Water	0.4	0.0
<i>Subtotal Scope 3</i>		<i>6,780.8</i>	<i>85.1</i>
Total		7,967.2	100.0

When offsetting emissions, a safety margin of 10 % is applied to the carbon footprint. This covers uncertainty in the data used for calculating the carbon footprint, which occurs naturally through database values, assumptions and estimations taken. This approach ensures that all emissions are compensated within the defined system boundaries. The quantity of carbon emissions to be offset amounts to 8,763.9 t CO₂.

Figure 1: Percentage share of emissions per scope

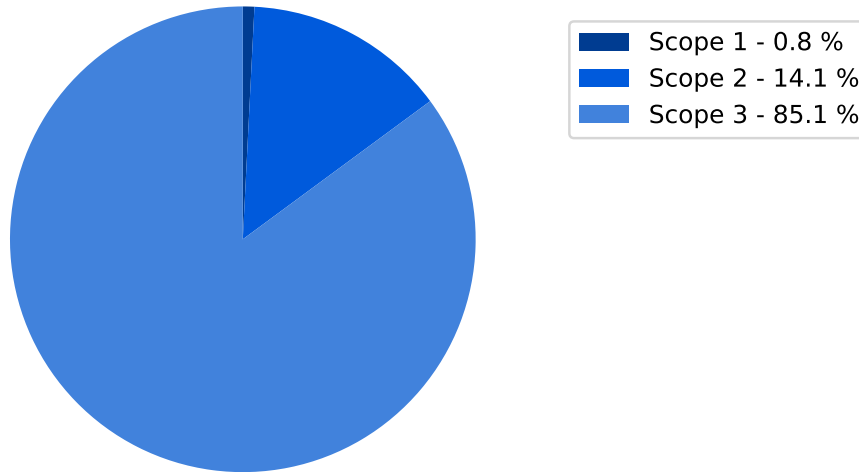
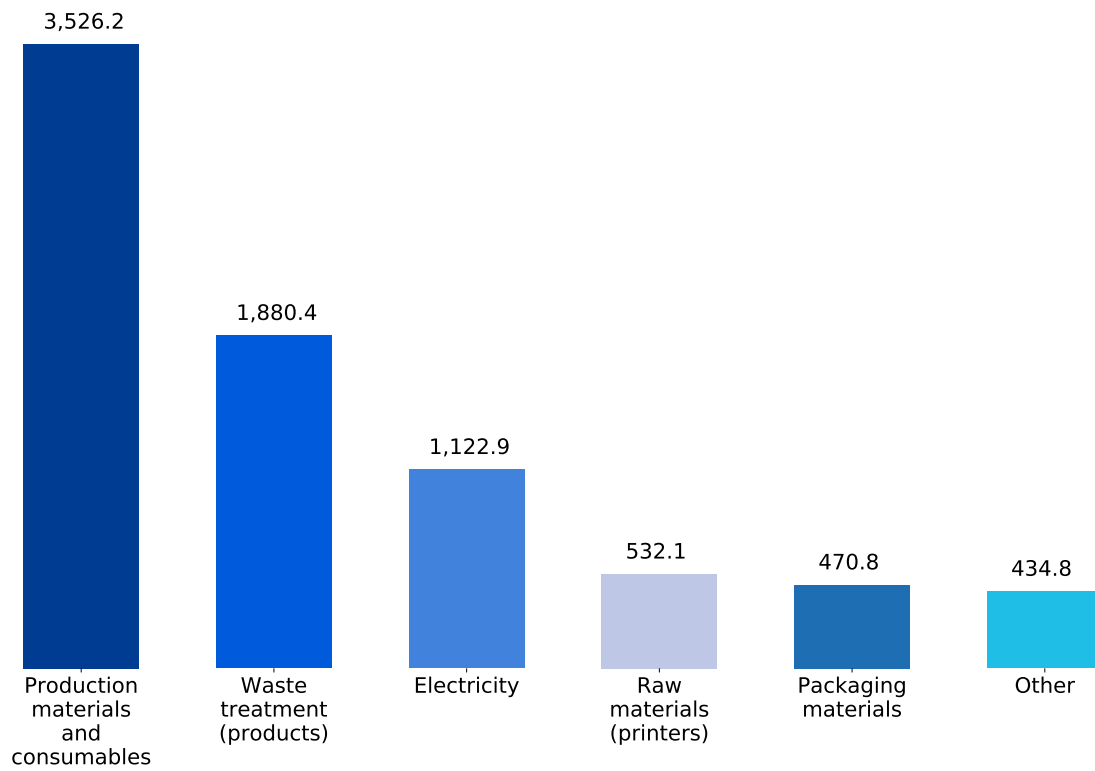


Figure 2: Most significant emission sources in t CO₂



Conclusion

This Corporate Carbon Footprint is an important building block for a transparent and successful climate action strategy. This can enable you to:

- Identify CO₂ hotspots
- Define reduction targets for CO₂ supply chain emissions
- Measure progress in avoiding or reducing CO₂ emissions
- Offset unavoidable CO₂ emissions by supporting carbon offset projects.

Emissions from Scope 1 (direct emissions) make less than 1% of the total emissions in 2020. The reason for this is, Multipak does not require room heating in their installations or process heat in their production processes. Therefore, all energy consumption at Multipak is electrical, which highlights the importance of Scope 2 emissions (14% of total emissions).

Scope 3 emissions make 85% of the total emissions. The most relevant source of emissions is production materials (44%), followed by the disposal of the products at their end-of-life, which makes almost 24%. Both sources of emissions are related to the products, therefore, possible reduction measures need to consider product design. By using recycled raw materials, emissions would be reduced.

End of life emissions were calculated under the assumption that the products cannot be recycled at the end of their life cycle and would therefore be incinerated. Thus, the emissions at the end of life could be reduced by improving the recyclability of the products.

In the following years, a regular update of the Corporate Carbon Footprint is recommended. This will enable monitoring and evaluation of climate action measures.

Appendix

Climate action and climate neutrality

Integrated climate action follows the principle: avoid unnecessary emissions, reduce existing emissions, and offset unavoidable emissions.

A regularly updated carbon footprint is a crucial tool for companies and organizations to identify significant emissions mitigation and reduction potential and to track the effectiveness of climate action measures over time.

Companies, processes or products are climate neutral when all carbon emissions have been calculated and offset by supporting carbon offset projects.

The mechanism of carbon offsetting is based on the fact that greenhouse gases are evenly distributed in the atmosphere and greenhouse gas concentration is therefore approximately the same throughout the world. Therefore, for global greenhouse gas concentration and the greenhouse effect, it is irrelevant where on Earth emissions are caused or avoided. Emissions that cannot be avoided locally can therefore be mathematically offset by climate action measures at another location. This offset is rendered possible by carbon offset projects.

By offsetting the emissions (for manufacturing companies, emissions excluding raw materials, packaging and logistics), Multipak has the opportunity to become a climate neutral company and draw attention to its commitment to climate action.

If a manufacturing company offsets all emissions, including raw materials, packaging and logistics, the manufactured products can also be labelled as climate neutral.

Thanks to the availability of climate neutral products, customers become increasingly aware about climate action. In addition, customers are given the opportunity to make a conscious decision for climate action by purchasing climate neutral products.

Description of methodology

In the following sections the procedure and underlying principles for calculating a Corporate Carbon Footprint in accordance with the guidelines of the GHG Protocol Corporate Accounting and Reporting Standard ("GHG Protocol") are described.

Reporting Standard

The GHG Protocol is the internationally recognized standard for greenhouse gas accounting on the corporate level. It was developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

It defines five fundamental principles for the calculation of carbon footprints:

- **Relevance:** The principle of relevance requires that all major emissions sources be considered in calculating a company's carbon footprint, and the report should be useful for internal and external decision making.
- **Completeness:** The principle of completeness means that all relevant emissions sources within the boundaries must be respected.
- **Consistency:** To facilitate the comparison of results over time, accounting methods and boundaries must be documented and maintained in the following years. Any changes in methodology and boundaries must be mentioned and justified.
- **Accuracy:** Distortions and uncertainties should be reduced as much as possible so that the results offer a solid basis for decisions by stakeholders.
- **Transparency:** The results should be presented in a transparent and comprehensible manner.

Process steps

The following steps are necessary to calculate a carbon footprint:

- Definition of goals
- Definition of boundaries
- Data collection
- Calculation of the carbon footprint
- Documentation of results

Goals

The Corporate Carbon Footprint serves to identify the largest sources of emissions within the company and along the upstream and downstream value chain. It thus forms the basis for the development of a climate action strategy in which targets, measures and responsibilities for the reduction of greenhouse gas emissions are defined. In subsequent years, it serves to check whether the goals have been achieved, in which areas progress has been made, and in which areas there is a need for action to reduce CO₂.

Definition of boundaries

Carbon accounting requires a clear determination of the inventory boundaries. This includes organizational and operational boundaries.

The organizational boundaries describe the organizational unit and the timeframe to which the Corporate Carbon Footprint refers. The system boundaries may be drawn according to operational or financial control ¹ or according to equity share.

¹ For most companies, system boundaries according to operational or financial control are identical.

The operational boundaries describe the emissions sources that are considered within the organizational boundaries. For the classification of different emissions sources, the Greenhouse Gas Protocol differentiates between three categories (“Scopes”), which are the basis of each Corporate Carbon Footprint:

Scope 1

Scope 1 includes all carbon emissions that can be directly managed by the accounting corporation (direct carbon emissions). This includes emissions generated by the combustion of fossil fuels (mobile and stationary), chemical and physical processes, and the use of refrigeration and air conditioning equipment.

Scope 2

Scope 2 represents indirect carbon emissions from purchased electricity, steam, district heating and cooling. All emissions that are caused by fossil fuel combustion by external energy providers are listed here. The identification in a separate category avoids double counting when comparing CO₂ emissions from different companies.

Scope 3

All remaining carbon emissions that cannot be directly managed by the company belong to Scope 3 (other indirect carbon emissions). This includes all carbon emissions that are related to products and services used or processed by the accounting corporation. Carbon emissions that are associated with the use of sold products and services are also included if direct carbon emissions are generated.

According to the Greenhouse Gas Protocol, the calculation of carbon emissions is mandatory for Scope 1 and Scope 2 but voluntary for Scope 3.

Data collection and calculation

For the calculation, consumption data and emission factors are translated into carbon emissions. The data collected and evaluated are classified as primary and secondary data.

Primary data are data that are collected in direct relation to an object of investigation. Secondary data represent data obtained by the processing and modelling of primary data.

For the conversion of consumption data into carbon emissions, primary as well as secondary data from lifecycle analysis databases (e.g. ecoinvent or GEMIS) are used.

Disclosed Greenhouse Gases

The present Corporate Carbon Footprint discloses all emissions as CO₂ equivalents (CO₂e). This means that in addition to CO₂, the calculation also includes the six other greenhouse gases regulated by the Kyoto Protocol: methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and nitrogen trifluoride (NF₃). These gases are all converted into the global warming potential of CO₂ and thus represent CO₂ equivalents (CO₂e). For better legibility, the emissions are simply referred to as carbon emissions or “CO₂”.

Improving lives

About ClimatePartner

ClimatePartner is a solutions provider in corporate climate action and helps clients calculate, reduce, and offset carbon emissions. This renders products and companies climate neutral.

ClimatePartner was founded in Munich in 2006 and has over 250 employees who advise more than 4,000 customers.

Publisher

Multipak Ambalaj ve Gıda Sanayi Tic. A.Ş.
Batı Beton Caddesi No: 10/1
35875 Yazıbaşı - Torbalı / İzmir

Tel.: +90 232 853 7495 112

www.multipak.com.tr

Contractor

ClimatePartner Deutschland GmbH
St.-Martin-Str. 59
81669 Munich

Tel.: +49 89 1222875-0

support@climatepartner.com

www.climatepartner.com

September 2021

Copyright

The copyright remains with the publisher. Full or partial reproduction of this report in any other manner is solely permitted with the written consent of the copyright holder.

www.climatepartner.com