

Report Carbon Footprint

beMatrix bv – update 2023

Wijnendalestraat 174 | 8800 Roeselare | Belgium

1. Overview

The report is made for beMatrix bv, head office located at Wijnendalestraat 174, 8800 Roeselare in Belgium; hereafter referred to as beMatrix.

1.1. Scope and organizational boundary

A CO2 footprint is the inventory of the total greenhouse gas emissions (GHG) caused by an individual, event, organisation or product. The footprint is expressed in tonnage CO2 equivalent (tCO2e). The analysis for an organisation can be performed at different levels (Greenhouse Gas Protocol, 2022):

- **Scope 1:** Direct CO2 emissions, caused by own sources within the company. This concerns emissions from own building, transport and production-related activities. Examples are own generators, gas consumption and heating installations, own (truck) cars or the use of coolant in cooling equipment and climate installations.
- **Scope 2:** This includes the indirect emission of CO2 due to the generation of self-purchased and self-consumed electricity or heat. The company uses this energy internally, but does not generate it internally. It is physically generated elsewhere, for example in a power station.
- **Scope 3:** Indirect emissions of CO2 from sources that are not owned by the company and over which it has no direct influence, such as emissions caused by the production or extraction of purchased raw materials and materials and outsourced activities such as freight transport. Also, the indirect emissions as a result of employee business travel & commuting to and from work and business air traffic can belong to scope 3. Scope 3 comprises the CO2 emissions in the entire life cycle of all products that the company buys, manufactures and/or sells (upstream and downstream).

This emissions inventory has been made in accordance with the requirements of ISO 14064-1. In accordance with the GHG protocol, a distinction is made between 3 sources of emission (scopes) in 2 categories: direct emissions (scope 1) and indirect emissions (scope 2 and 3).

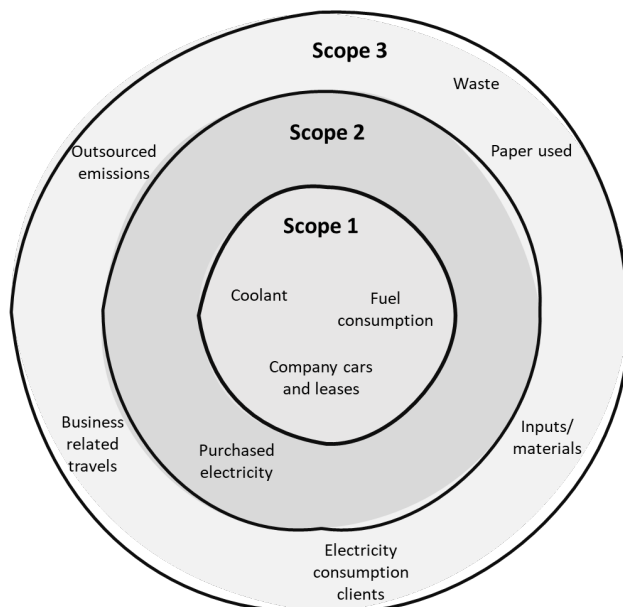


Figure 1: Schematic overview of the three scopes of a carbon footprint

The organisational and reporting boundary of the carbon footprint is made for fiscal year 2023. This report concerns a follow-up of the previous reporting on the consecutive fiscal years 2019, 2020, 2021, and 2022 for all (production) sites of beMatrix in Belgium.

1.2. Short description activities and ambitions

beMatrix is a stand building pioneer, being the one and only true inheritor of the original frame system with big holes, invented in 1993. Through continuous innovation and offering they provide a product range with endless event building possibilities.

Besides three production plants in Belgium (and 1 in USA), beMatrix has several service hubs across the globe, for rental, sales and technical support¹. They produce the frame system in-house from A to Z, which provides them control of every step in the production process. beMatrix operates in close collaboration with clients and suppliers to optimise existing products and to develop new solutions. During product development & process improvements the environmental footprint is always considered.

For beMatrix, sustainability is a core value that helps shape strategic decisions and is embedded in daily operations.

¹ Overview: <https://bematrix.com/eu/en/global-rental-network/locations>

The aim of beMatrix is to minimise the impact of the organization by becoming Carbon Neutral in 2026 for beMatrix Belgium. This carbon footprint will also indicate the progress of actions that are needed to reduce the climate impact, in line with Science-Based Targets.

2. Evolution of the carbon footprint

Table 1 gives a summary of the yearly emissions of beMatrix for the different GHG emission posts.

Table 1: Summary of total emissions per post in tCO₂e per year of beMatrix (Bilan Carbone).

Source of emission	2019 (tCO ₂ e)	Uncert. (in %)	2020 (tCO ₂ e)	Uncert. (in %)	2021 (tCO ₂ e)	Uncert. (in %)	2022 (tCO ₂ e)	Uncert. (in %)	2023 (tCO ₂ e)	Uncert. (in %)
Energy (LB)	228	6%	195	5%	240	5%	268	6%	271	6%
Non Energy (GHG leakage)	24	30%	24	30%	24	30%	24	30%	24	30%
Inputs	8855	16%	1476	16%	4281	22%	5 291	17%	4 915	16%
Packaging	7	35%	4	47%	1	20%	46	58%	42	60%
Freight	1576	39%	391	36%	929	22%	2 095	23%	2163	21%
Mobility	493	9%	419	11%	134	7%	175	10%	171	8%
Direct waste	50	31%	34	32%	41	33%	81	34%	68	33%
Carbon depreciations	639	47%	639	47%	639	47%	639	47%	639	47%
Total	11 873	13%	3183	13%	6289	16%	8 618	13%	8293	11%

In the summary calculations we use the (more conservative) estimation based on the location based approach. Using this approach, the overall CO₂ footprint of beMatrix for 2023 is **8293 ton CO₂e**, still below the footprint of 2019 which was 11 873 ton CO₂e. The main share of the emissions (60%) can be attributed to the inputs (dominantly aluminium). This is followed by a relatively smaller share of 26% from freight transports.

The uncertainty levels are below 20%, in accordance with the internationally accepted limit on uncertainty in carbon data. According to the ISO 14069:2013 standard the GHG emissions of beMatrix are aggregated in 12 categories, subdividing direct emissions and different sources of indirect emissions. An update of the ISO norm is under development; the GHG emissions according ISO 14064:2018 can be consulted in annex.

Subdivided per scope, according the ISO 14069:2013 standard and following the location-based approach, the relative share of the emission of beMatrix (year 2023) includes 2% in scope 1 (direct emissions), 1,7% in scope 2 (indirect emissions from electricity consumption) and 96.3% in scope 3 (other indirect emissions).

Interannual changes

Table 2 gives a summary of the interannual change (in %) for the different GHG emission posts. Note that in 2023, 66 118 frames were produced, while the consolidated EBITDA was +3 998 021 euro. A total of 79.76 FTE was employed in 2023 (including Stedi & RSC Belgium).

Table 2: Summary of interannual change (in % for the different GHG emission posts (Bilan Carbone, 2023).

Source of emission	Change 2023-2019 (%)
Energy (LB)	+19%
Non Energy (GHG leakage)	0.00
Inputs	-44%
Freight	+37%
Mobility	-65%
Direct waste	+36%
Carbon depreciations	0.00
Total (LB)	-29%

Energy: The direct emission related with the use of **fuel oil** equalled 24 tCO₂e in 2019; while no fuel oil was used in 2021,2022 and in 2023. Since the change of production hall, that room was no longer heated, although it is still used as stock warehouse where heating is fixed at 6°C. This is a positive evolution in line with the Climate Action Plan. **Electricity consumption** was higher in 2023 (649.165 MWh) as compared to 2022 (608.017 MWh), 2021 (412.232 MWh) and 2019 (581.134 MWh). This can be related with the impact of the opening of a third hall in late 2019 and the installation of the automatic production line. **Natural gas use** reduced in 2023 (500.421 MWh) as compared to 2022, 2021 (520.725 MWh in 2022 but 624.420 MWh in 2021). One should note that 2021 was the coldest year since 2016 (KMI, 2022).

Inputs: Emissions from metal resources, mainly aluminium, are responsible for the bulk of the footprint related with this emission post. In 2023, the **share of recycled aluminium** (E-Max, Hydro, Aliplast) was

further on the rise resulting in an average of 51.25% of the total recycled aluminium content. Supply from Gulf (delivering non-recycled aluminium) even stopped in May 2022. Meanwhile, Ayde TR is aiming to move from 0 % recycled aluminium in its supply towards 65% recycled aluminium over the next years (starting from 2024).

The purchased **LEDskin volumes** were very low in 2021, due to covid and because of the large stock that was still present, but recovered in 2022. We see in 2023, the amount of ledskins purchased dropped again with about 2800 items. Finally, it is noted that a large amount of **ethanol** was purchased and stocked in 2021, corresponding to a significant extra impact after a new production line was opened, so less ethanol was purchased in 2022. But the purchase went up again in 2023 with 13 818 kg.

Packaging and waste: The purchased amount of plastics/foam and cardboard is significantly higher in 2022 as compared to 2021. The low **purchase of packaging** in 2021 are due to covid and because of the large stock that was still present. The amount of packaging dropped again in 2023 with 4 998 kg. It is also noteworthy that a lot of **aluminium-contaminated waste** water was generated in 2022 (78 ton as compared to 20 ton in 2019). However, this was reduced in 2023 to 63 ton, but this is still higher than reference year 2019. The reason is the start of production on the automatic line. Residual waste volumes have remained rather stable since 2019.

Mobility and freight: Company owned cars are responsible for a significant part of the GHG emissions of the beMatrix mobility component; most are not yet electric vehicles. There is a significant decrease in **business related flight travel** since last year. The amount of flying kilometres was reduced by half. In 2023 we see the amount of **commuting car travel** slightly increased compared to 2022, maybe related with the increase in FTE (79.76 in 2023 compared to 56.8 in 2022). But on the longer term, there is also a very significant reduction in commuting car travel. This can be related with (i) a significant reduction in the number of employees related with the Covid crisis, from 109 FTE in 2019; (ii) a reduction in the average commuting distance; (iii) the start of a 20% telework scheme for white-collar workers. There is also a decrease in **outgoing aerial shipments** to Norcross (US), however the emissions from in – and outbound aerial transport increased compared to last year. This could be due to the delivery of ledskins by plane. It should also be noted that profiles for the USA are shipped directly via sea from Ayde TR to BM USA since October 2022 (no longer first via truck to Belgium and then to the USA).

3. Conclusions

The CO₂ footprint of beMatrix comprises a total of **8293 ton CO₂e in 2023** according to the location-based approach, with an uncertainty of 11%. Subdivided per scope, this associates with 2% in scope 1, 1.7% in scope 2 and 96.3% in scope 3. The input-related emissions remain dominant with a share of 4915 tCO₂e in 2023. This includes mainly aluminium inputs.

In the year of analysis (2023), we can observe the following first trends:

- ✓ No fuel oil was used in 2023 (0). This is a positive evolution.
- ✓ Electricity use increased slightly over the years, as a response to the opening of a third hall in late 2019 and installation of the automatic line. However, since the contractual changes, nearly all electric consumption to date is local and renewable (verifiable via groencheck).
- ✓ Natural gas use declined over the last year, related with warmer temperatures, although the opening of the third hall that is badly isolated has a long-term impact.
- ✓ In 2023, the share of recycled aluminium (E-Max, Hydro, Aliplast) remained the same.
- ✓ There is also a long-term reduction in commuting car travel. This can be related with (i) a significant reduction in the number of employees during the Covid crisis; (ii) a reduction in the average commuting distance; (iii) the start of a 20% telework scheme for white-collar workers.
- ✓ To reduce aerial freight-related emissions, better planning and forecast are advised.

The Climate Action Plan is successfully started and the impact of the first actions starts to become clear. The Scope 3 emissions are declining along the SBTi. For Scope 1 and 2, faster reduction of natural gas use and fossil company cars is still required; and full procurement of renewable electricity is required.

Table 10: Monitoring results vs science-based targets .

Scope	tCO ₂ e in 2019	2026 Target	tCO ₂ e in 2023	Target in 2026	On linear track?
Scope 1	175	1.5C: minus 46.2% in absolute terms	162	94 tCO ₂ e	No: further reduction of gas and fossil cars still required
Scope 2	128	1.5C: minus 46.2% in absolute terms	143	69 tCO ₂ e	No: higher degree of procurement of renewable electricity required*
Scope 2	% renewable energy: 9.4%	80% of electricity supply comes from renewables	69%	80%	yes
Scope 3	11 570	tCO ₂ e: minus 7% per year	7 988	8388 t CO ₂ e	In absolute terms: yes

*note that this is location based.