Product Carbon Footprint (CO_2e) – Information

Single-channel micropipette Transferpette® *pro*, DE-M

The Product Carbon Footprint (PCF) was calculated on 15.06.2026 for the product **Single-channel micropipette Transferpette® *pro*, DE-M**. The value refers to one sales unit of the product including product packaging and excluding transport packaging of the Brand Group, produced at our site located at Otto-Schott-Straße 25, 97877 Wertheim, Germany.

The emissions generated in the various life cycle stages for the sales unit are as follows:

1 Cat-No.	2 Description	3 Sales unit	4 Emissions in g CO_2e from raw material extraction and pre-fabrication including emissions from upstream transport	5 Thereof emissions in g CO_2e from upstream transport *(see limitations)*	6 Emissions in g CO_2e from production and storage	7 Total emissions in g CO_2e (columns 4 and 6)
706868	Transferpette® *pro* 0.1 - 1µl	1 piece	9,574 (93%)	153 (1.6%)	701 (7%)	10,275
706869	Transferpette® *pro* 0.1 - 2,5 µl	1 piece	11,127 (94%)	178 (1.6%)	698 (6%)	11,825
706870	Transferpette® *pro* 0,5 - 10 µl	1 piece	9,368 (93%)	150 (1.6%)	706 (7%)	10,074
706871	Transferpette® *pro* 2 - 20 µl	1 piece	9,311 (93%)	149 (1.6%)	717 (7%)	10,028
706872	Transferpette® *pro* 2 - 20 µl	1 piece	9,097 (94%)	146 (1.6%)	632 (6%)	9,728
706873	Transferpette® *pro* 5 - 50 µl	1 piece	10,100 (94%)	162 (1.6%)	686 (6%)	10,787
706874	Transferpette® *pro* 10 - 100 µl	1 piece	8,743 (93%)	140 (1.6%)	664 (7%)	9,407
706878	Transferpette® *pro* 20 - 200 µl	1 piece	8,904 (93%)	142 (1.6%)	664 (7%)	9,569
706879	Transferpette® *pro* 30 - 300 µl	1 piece	8,864 (93%)	142 (1.6%)	684 (7%)	9,549
706880	Transferpette® *pro* 100 - 1000 µl	1 piece	9,072 (93%)	145 (1.6%)	655 (7%)	9,728
706881	Transferpette® *pro* 250 - 2500 µl	1 piece	9,544 (94%)	153 (1.6%)	638 (6%)	10,182
706882	Transferpette® *pro* 500 - 5000 µl	1 piece	9,602 (93%)	154 (1.6%)	703 (7%)	10,305
706884	Transferpette® *pro* 1000 - 10000 µl	1 piece	10,183 (94%)	163 (1.6%)	680 (6%)	10,863

The Brand Group has developed a systematic PCF and let the system be validated by TÜV SÜD. The system development and calculation of the PCF are based on DIN EN ISO 14067:2018 Greenhouse gases – Carbon footprint of products, requirements and guidelines for quantification. The CO_2e values (CO_2 equivalents) determined by this systematic approach serve as the basis for the published PCFs. The declared unit of calculation is one sales unit including product packaging and excluding transport packaging.

The DIN EN ISO 14067:2018 standard deals with the quantification of the carbon footprint of products. It defines requirements and provides guidelines for assessing the amount of greenhouse gas emissions released over the entire life cycle of a product. The standard supports the use of uniform and objective methods. The PCF is an essential tool for improving the transparency of greenhouse gas emissions from products.

The Brand Group has decided to select the system boundaries for calculating the PCF in such a way that all company-related emissions (Scope 1-3) accounting for more than 5 percent of total emissions (of the production companies) and directly related to the manufacturing of the products are included. For the calculation the “cradle-to-gate” approach has been chosen. This means that all relevant CO_2e emissions from the life cycle stages of raw material extraction and prefabrication, upstream transport and production and storage are included in the PCF calculation. The used emission factors are taken from recognized databases such as BEIS, GEMIS, and EXIOBASE, and in some cases from information provided by upstream suppliers. The activity data for manufacturing of the product were determined on the basis of the bill of material, routings, and purchasing data.

The systematic approach of product carbon footprint calculation is subject to the following limitations (further details can also be found in the PCF study report):

+ For complex products, the emission factors are spend-based, which can lead to inaccuracies when purchase prices change. Wherever possible, mass-based emission factors were used.
+ Emissions from biogenic materials do not exist, so that the conservative assumption was made that all emissions originating from fossil sources. The emission factors of natural gas suppliers are only available as CO_2, not as CO_2e.
+ For upstream transport, the calculation for purchased materials and services does not distinguish between raw material extraction and prefabricationn and upstream transport for calculated CO_2e values per product. Based on an analysis, it can be assumed that, on average, 1.6% of the total emissions attributable to raw material extraction and prefabrication including upstream transport, are relatable to upstream transport (see column “thereof”). This assumption is applied as a standard rate to the calculation results for all products, however, the proportion may be higher in special cases. The total emissions per product remain unaffected by this. When calculating transport emissions, only the distance from the suppliers to the Brand Group’s plants was considered. It is assumed that further upstream transport is implicitly included in the emission factors for the materials, which is only certainly the case for emission factors explicitly related to the supplier’s country. For the applied transport emission factors, the conservative assumption was made that deliveries from European suppliers are made by truck and deliveries outside Europe are always made by plane.
+ The cradle-to-gate approach was used for the systematic PCF calculation. The system boundaries therefore do not include downstream transport, product utilization, nor product recycling, reutilization, and disposal. Furthermore, only systematic (process-related, unavoidable) waste (e.g. sprues, run-in material, etc.) was included as part of bill of materials. Waste beyond this systematic waste was not included, as it is minimized by in-process controls and rework. Likewise, production-related indirect materials and services not included in the bill of materials (e.g. maintenance, water, auxiliary and operating materials) as well as waste in production are not considered. However, the analysis shows that these account for less than 5 percent of total emissions.

The PCF calculated and presented above is valid for a maximum of one year from the calculation date or until a new value is calculated and published ahead of schedule.
The PCF is one of many environmental indicators and does not reflect any overarching preference for a product from an environmental perspective.

Brand Group’s systematic PCF calculation approach was validated by TÜV SÜD in 2025. More detailed information about the methodology as well as the PCF study report can be obtained on the following website www.brand.de/pcf .