

# Estimated carbon emissions for standard clothing vs. LE CHEMISEUR clothing

By Jan, founder LE CHEMISEUR, updated February 2024.

## Executive Summary

At LE CHEMISEUR, we only sell made to measure clothing. My vision since day one, 10 years ago, is that it's better for the client, and for the planet : we only produce exactly what the client needs.

This means we are very different from other fashion companies: Everything is optimized towards online made to measure: the production, supply chain, technology, our website, customer support and marketing. We innovated by using machine learning to help clients get their sizing right, and patented our Sizing Key system.

This report provides an analysis comparing the carbon emissions of LE CHEMISEUR®'s clothes with those of standard, mass-produced clothing.

The key finding is that **LE CHEMISEUR shirts save 43% of emissions** compared to the world average of ready to wear shirts sold through e-commerce .

The main contributors are :

**No deadstock** - Compared to 20% in the clothing industry.

**Lower Return Rates** - 5% instead of 30%.

**Low carbon fabric sourcing** - European made fabrics have significantly lower emissions because electricity produced in Europe is less carbon intensive than in Asia.

This is not quantified here, but our concept also fosters a culture of conscious consumption. Our customers invest money and wait 2 to 3 weeks for high-quality, perfectly fitting garments, shifting away from the fast-fashion paradigm of discounts, impulse buys, and waste.

## Estimated carbon emissions of LE CHEMISEUR products compared to standard clothing.

### Made to Order production saves the 20% of deadstock found in Mass Produced garments.

The carbon emissions to make a single shirt made to order and mass produced is similar. However, there is a difference: in mass production, the types and sizes of shirts being produced are determined by a sales forecast. That means that there is overproduction of some SKUs, which end up as deadstock.

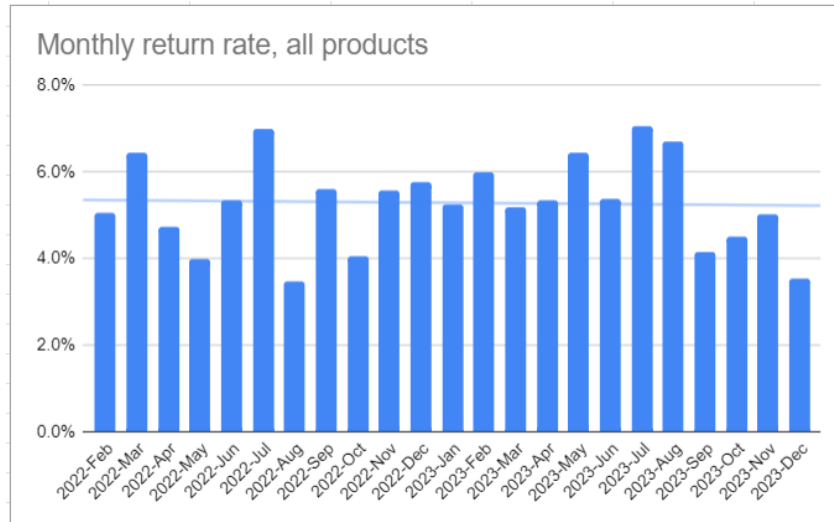
The industry average overproduction is currently about 20%, defined as unsold stock following sales and discounts. *Source: page 42 of The McKinsey Fashion on Climate full report (2020).*

This 20% deadstock does not even take into account the fact that sales and discounts push clients to consume more than they really need, and sometimes buy things that they never wear. As McKinsey put it in the same report:

For example, brands and retailers could offer products that are made to order, which would reduce the volume of garments that can only be sold at significant discounts and thereby add volume, and emissions, without contributing much value. If the industry could reduce the share of stock sold at a discount by 15 percentage points, it would achieve a volume and emissions decline of about 10% without any impact on value growth.

### LE CHEMISEUR saves 25% on returns because it has 5% returns compared to 30% for mass produced clothing sold through e-commerce.

The average clothing e-commerce return rate is about 30. *Source : 35% according to page 40 of The McKinsey Fashion on Climate full report (2020), 26% according to : Ecommerce Returns : Shopify Expert Guide to Best Practices (2024).*



LE CHEMISEUR's return rate is 5% (last 6 months average).

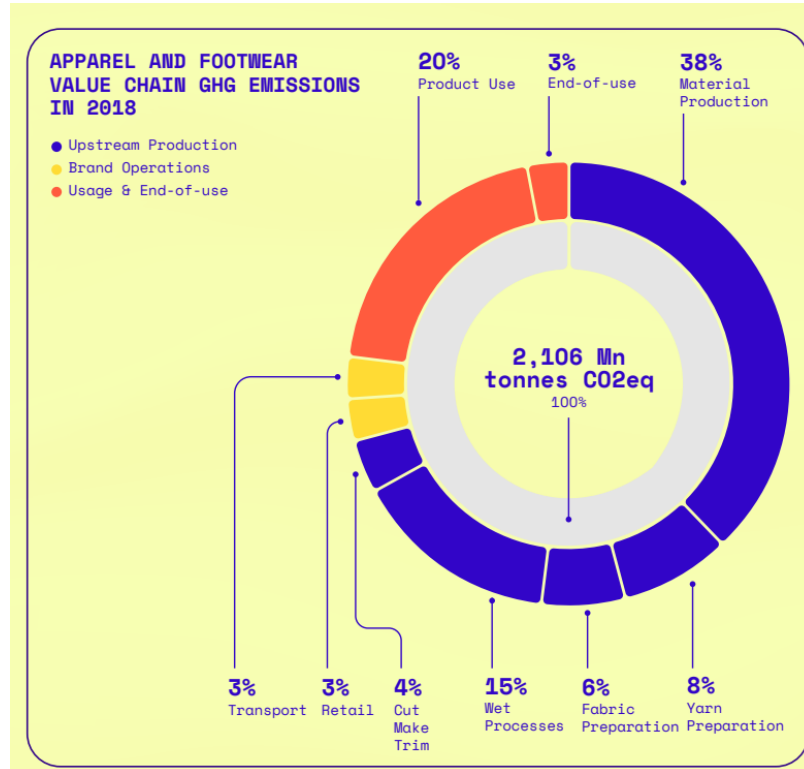
Our return rate is much lower than that of ready to wear brands, for three reasons :

**Because our clothing is made to measure,** LE CHEMISEUR clothes usually fit much better than off the shelf sizes. Also, customers can choose the details they like (collar shape, a pocket or no pocket...), and are usually happy with what they create.

**People don't order "just to try" and then send back.** Creating a custom product through our algorithm requires several steps, there is nothing like "one button shopping". They wait 2 to 3 weeks before receiving the product. While we offer a warranty on the size (free alterations or remake), we do not offer refunds. This is allowed under French law for made to measure products, while mass production brands must accept refunds for at least 14 days.

**Our return rate is low because our clients are very loyal once they get their sizing right.** More than two thirds of our volume are repeat buys, and we have almost no returns on them. In mass production clothing clients change brands easily but might be disappointed because the "medium size" in one brand does not fit the same as the "medium" in another brand. With our sizing key system, this problem is solved.

Comparing the GHGs of LE CHEMISEUR to that of other clothing brands.



As a baseline, I used this chart showing the GHG emissions of the clothing industry. *Source : The McKinsey Fashion on Climate full report (2020).*

I make the assumption that our product categories (88% shirts, 2% vests and 10% trousers in volume) follow the same breakdown.

The numbers in this chart are for the entire industry, which means **they include the emissions to produce garments that end up in deadstock or are returned.**

**Material production (mostly cotton farming): Industry 38%, LE CHEMISEUR 25%**  
 I assume the material production for LE CHEMISEUR is similar to that of the industry, even if we sell about 25% organic or recycled fabrics which is probably better than average.

However, these numbers include overproduction related to deadstock and returns. To compare it to LE CHEMISEUR's emissions, we must take away the production of garments made for deadstock and returns:

$$\text{LE CHEMISEUR} = 38 \% \times 1 / (1 + 20\%) \times 1 / (1 + 25\%) = 25 \%$$

**Yarn and Fabric preparation and Wet processes, Cut make trim: Industry 33%, LE CHEMISEUR 8%**

94% of our fabrics are sourced in Europe (this is transparently explained for each fabric on our website). According to the European Environment Agency (EEA), the EU average carbon intensity was around 234 grams of CO<sub>2</sub> per kWh in 2019. According to the International Energy Agency (IEA), the average carbon intensity for electricity generation in China was

around 681 grams of CO<sub>2</sub> per kWh in 2019. We can therefore adjust our emissions by the ratio of 234/681.

Also, these numbers include overproduction related to deadstock and returns. To compare it to LE CHEMISEUR's emissions, we must take them away.

LE CHEMISEUR = 33 % x 1/(1+20%)x1/(1+25%) x 234/681= 8 %.

#### Retail : Industry 3%, LE CHEMISEUR 0%

We have no retail operations, being an online business.

#### Transport : Industry 3%, LE CHEMISEUR 2%

I assume that the emissions are the same for us. Our transport is reasonably green because we ship by boat and truck from Tunisia or Portugal to France (no plane, short distance). And we use the "Colissimo" service for shipping to the final customers, which offsets carbon emissions. We use small cardboard packaging with no plastic. However, as an online merchant we do send a lot of parcels.

To compare to industry, we must take away emissions linked to lower returns.

LE CHEMISEUR emissions = 3 % x 1/(1+25%) = 2%

#### Product use : 20% for both

I assume that it is the same for us and for the industry.

#### End of use : Industry 3%, LE CHEMISEUR 2%

They are the same, however here industry numbers include emissions linked to deadstock and returns. To compare it to LE CHEMISEUR, we have to take them away :

LE CHEMISEUR emissions = 3 % x 1/(1+20%)x1/(1+25%) = 2%

## Conclusion

**Taking Industry emissions as a baseline of 100%, LE CHEMISEUR emissions are at 57%, saving 43% of emissions.**

This is an approximation, and we hope to go into more detail in the next years, and continue to improve. But there is a significant impact.

We have served 20 000 clients, and each of them has started to consume in a more responsible way.