



**Nordisk Microfiber**

# **Life Cycle Assessment Cradle to Gate**

**Auto Poleringsklud, 40x40 cm**

**2025-12-19**

# Summary



## 01 | Methodology



## 02 | Results

# 01

## Methodology

# Environmental Impact Assessment

## Functional unit

"Product 'Auto Poleringsklud, 40x40 cm' (product code: AUTO-40-B) is made of 80% polyester + 20 % polyamide, weighs 0.070 kgs, and is certified under Oekotex"

## Impact Indicator

The impact is measured through the "EF v3.1 method" method

## Hypothesis

The data source for the emission factors is Ecolnvent 3.12. The System Model used is allocation, cut-off by classification.

Where data was not available from NMF, conservative estimates have been applied.

Assumptions include; origin of raw materials (GLO, IN averages) and manufacturing processes (GLO averages).

# Environmental Impact Assessment

## System Boundaries

The scope of this study is Cradle-to-Gate and assesses according to EF v3.1 as LCIA (Life Cycle Impact Assessment) method is developed by the European Commission.

This method is compatible with ISO 14040/44 and PEF. This LCA has not been independently reviewed.

## Exclusions

The following stages have been excluded: Downstream Transportation, Use and End-of-Life.

# Emission Factor Inventory

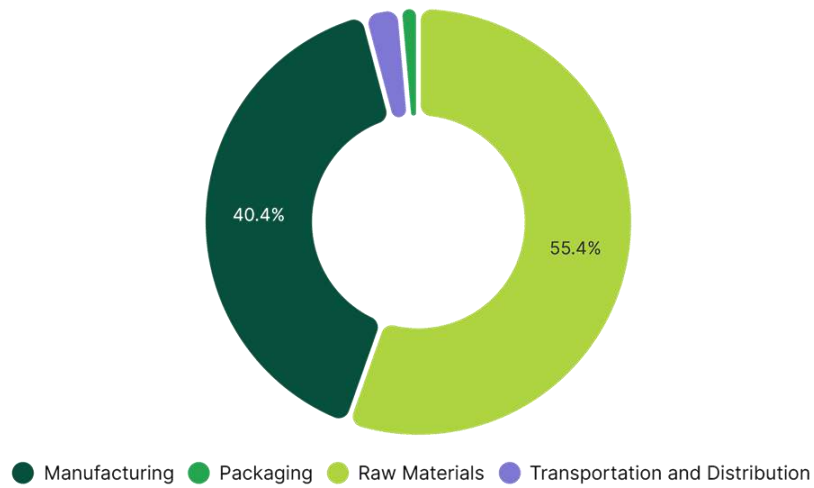
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# 02

## Results

Auto Poleringsklud, 40x40 cm

# Climate Change

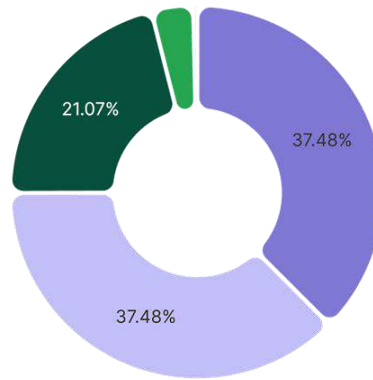


| Step                            | Impact<br>(kg CO <sub>2</sub> eq) | Percentage<br>(%) |
|---------------------------------|-----------------------------------|-------------------|
| Raw Materials                   | 0.51                              | 55.42 %           |
| Manufacturing                   | 0.37                              | 40.45 %           |
| Transportation and Distribution | 0.03                              | 2.72 %            |
| Packaging                       | 0.01                              | 1.41 %            |
|                                 |                                   |                   |
| TOTAL                           | 0.93                              | 100.00 %          |



Auto Poleringsklud, 40x40 cm

# Climate Change - Raw Materials

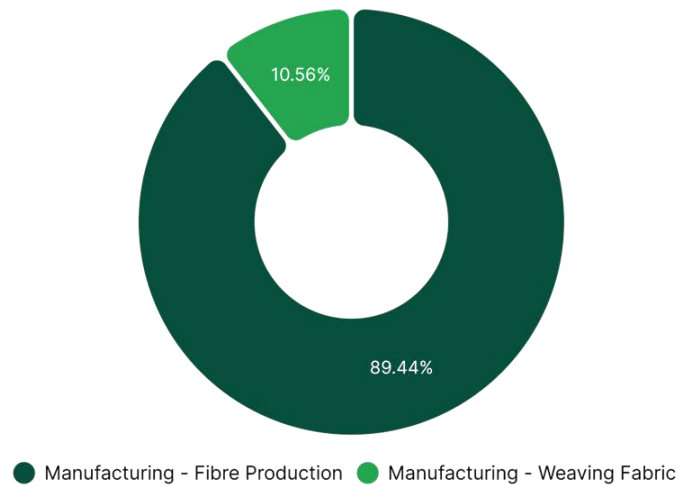


- Polyamide - Main Fabric - Raw Materials - KGs
- Polyester - Edge Tape - Raw Materials - KGs
- Polyester - Label 1 - Raw Materials - KGs
- Polyester - Main Fabric - Raw Materials - KGs
- Polyester - Sewing Thread - Raw Materials - KGs

| Activity                                        | Emission Factor Num | Quantity             | Unit | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|-------------------------------------------------|---------------------|----------------------|------|--------------------------------|----------------|
| Polyester - Sewing Thread - Raw Materials - KGs | 2                   | 0.05                 | kg   | 0.19                           | 37.48 %        |
| Polyester - Main Fabric - Raw Materials - KGs   | 2                   | 0.05                 | kg   | 0.19                           | 37.48 %        |
| Polyamide - Main Fabric - Raw Materials - KGs   | 1                   | 0.01                 | kg   | 0.11                           | 21.07 %        |
| Polyester - Edge Tape - Raw Materials - KGs     | 2                   | 5 · 10 <sup>-3</sup> | kg   | 0.02                           | 3.60 %         |
| Polyester - Label 1 - Raw Materials - KGs       | 2                   | 5 · 10 <sup>-4</sup> | kg   | 1.85 · 10 <sup>-3</sup>        | 0.36 %         |
|                                                 |                     |                      |      |                                |                |
| TOTAL                                           |                     |                      |      | 0.51                           | 100.00 %       |

Auto Poleringsklud, 40x40 cm

# Climate Change - Manufacturing



| Activity                         | Emission Factor Num | Quantity | Unit | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|----------------------------------|---------------------|----------|------|--------------------------------|----------------|
| Manufacturing – Fibre Production | 3                   | 0.07     | kg   | 0.34                           | 89.44 %        |
| Manufacturing – Weaving Fabric   | 4                   | 0.07     | kg   | 0.04                           | 10.56 %        |

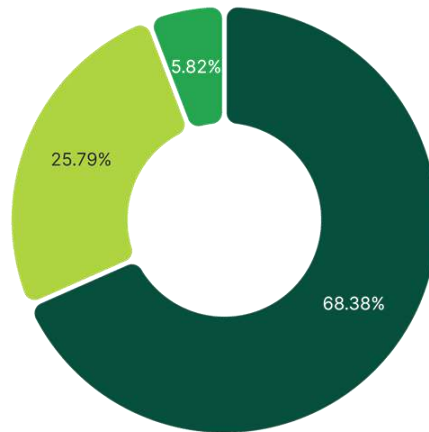
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| TOTAL |  |  |  | 0.37 | 100.00 % |
|-------|--|--|--|------|----------|

Auto Poleringsklud, 40x40 cm

# Climate Change - Packaging

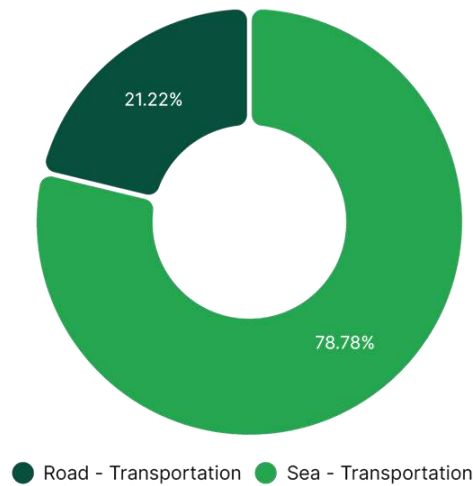


● Cardboard Box - Tertiary Packaging - KGs ● Paper Sticker - Primary Packaging - KGs

| Activity                                 | Emission Factor Num | Quantity             | Unit | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|------------------------------------------|---------------------|----------------------|------|--------------------------------|----------------|
| Cardboard Box – Tertiary Packaging – KGs | 5                   | $7.06 \cdot 10^{-3}$ | kg   | $8.94 \cdot 10^{-3}$           | 68.38 %        |
| Polyethelyne – Primary Packaging – KGs   | 6                   | $1 \cdot 10^{-3}$    | kg   | $3.37 \cdot 10^{-3}$           | 25.79 %        |
| Paper Sticker – Primarry Packaging – KGs | 7                   | $3 \cdot 10^{-4}$    | kg   | $7.61 \cdot 10^{-4}$           | 5.82 %         |
|                                          |                     |                      |      |                                |                |
|                                          |                     |                      |      |                                |                |
|                                          |                     |                      |      |                                |                |
| TOTAL                                    |                     |                      |      | 0.01                           | 100.00 %       |

Auto Poleringsklud, 40x40 cm

# Climate Change - Transportation and Distribution



| Activity              | Emission Factor Num | Quantity | Unit        | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|-----------------------|---------------------|----------|-------------|--------------------------------|----------------|
| Sea - Transportation  | 8                   | 2.06     | metric_t_km | 0.02                           | 78.78 %        |
| Road - Transportation | 9                   | 0.03     | metric_t_km | 5.35 · 10 <sup>-3</sup>        | 21.22 %        |

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|-------|--|--|--|------|----------|
| TOTAL |  |  |  | 0.03 | 100.00 % |
|-------|--|--|--|------|----------|

This LCA was carried out by Sustaina Company using the Greenly software. This LCA has not been third party verified.