



**Nordisk Microfiber**

# **Life Cycle Assessment Cradle to Gate**

**Clean Plus Damp Mop**

**2025-12-19**

# Summary



## 01 | Methodology



## 02 | Results

# 01

## Methodology

# Environmental Impact Assessment

## Functional unit

The functional unit of this analysis is "Product 'Clean Plus Damp Mop' (product code: 4040) is made of 40% polyester + 60% cotton, weighs 0.185 kgs, and is certified under Oeko-tex"

## Impact Indicator

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

## Hypothesis

The data source for the emission factors is EcolInvent 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

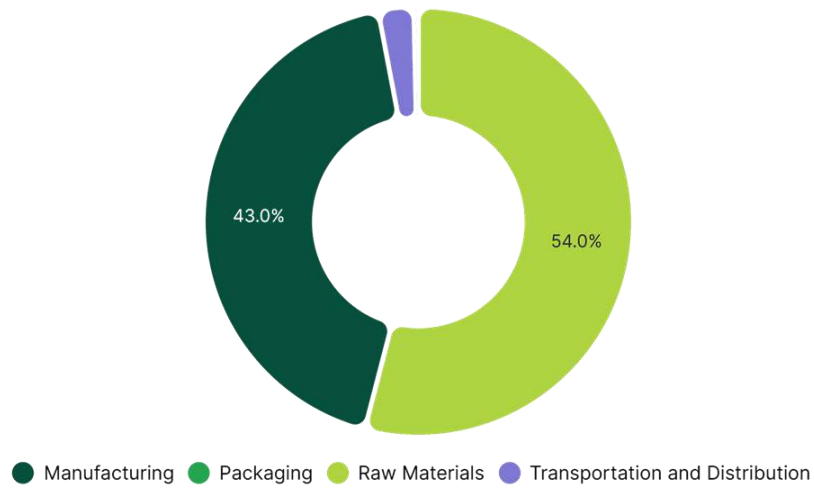
Nu m	Emission Factor	Source	Value	Unit
1	Polyethylene terephthalate, granulate, amorphous   Market for polyethylene terephthalate, granulate, amorphous   Market activity	ECOINVENT 3.12	3.70	kg
2	Yarn, cotton   Market for yarn, cotton   Market activity	ECOINVENT 3.12	7.61	kg
3	Weaving, synthetic fibre   Market for weaving, synthetic fibre   Market activity	ECOINVENT 3.12	0.56	kg
4	Fibre, polyester   Polyester fibre production, finished   Ordinary transforming activity	ECOINVENT 3.12	4.78	kg
5	Printed paper   Market for printed paper   Market activity	ECOINVENT 3.12	2.54	kg
6	Corrugated board box   Market for corrugated board box   Market activity	ECOINVENT 3.12	1.27	kg
7	Transport, freight, lorry, diesel, unspecified   Market for transport, freight, lorry, unspecified   Market activity	ECOINVENT 3.12	0.16	metric _t_km
8	Transport, freight, sea, container ship, heavy fuel oil   Market for transport, freight, sea, container ship, heavy fuel oil   Market activity	ECOINVENT 3.12	0.01	metric _t_km

# 02

## Results

Clean Plus Damp Mop

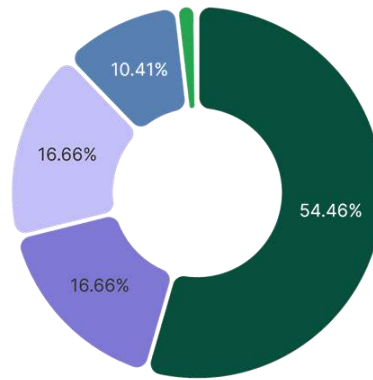
# Climate Change



Step	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Raw Materials	1.24	54.03 %
Manufacturing	0.99	42.97 %
Transportation and Distribution	0.06	2.66 %
Packaging	7.89 · 10 <sup>-3</sup>	0.34 %
TOTAL	2.3	100.00 %

Clean Plus Damp Mop

# Climate Change - Raw Materials

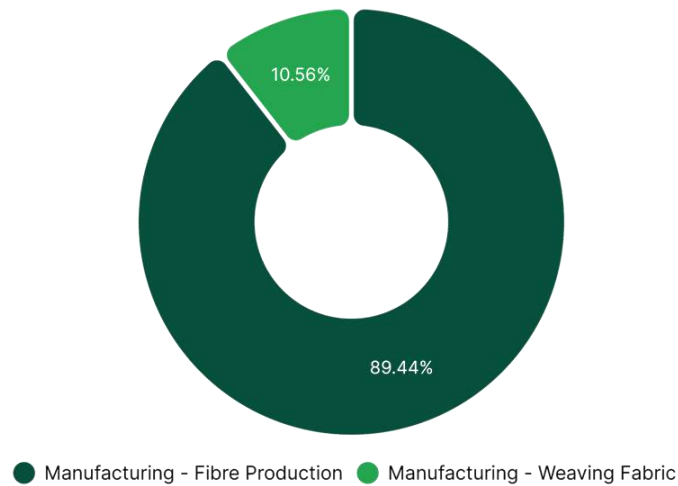


● Cotton - Main Fabric - Raw Materials - KGs ● Polyester - Edge Tape - Raw Materials - KGs  
● Polyester - Label 1 - Raw Materials - KGs ● Polyester - Main Fabric - Raw Materials - KGs  
● Polyester - Sewing Thread - Raw Materials - KGs ● Polyester - All Middle Fabrics - Raw Materials - KGs

Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Cotton - Main Fabric - Raw Materials - KGs	2	0.09	kg	0.68	54.46 %
Polyester - Sewing Thread - Raw Materials - KGs	1	0.06	kg	0.21	16.66 %
Polyester - Main Fabric - Raw Materials - KGs	1	0.06	kg	0.21	16.66 %
Polyester -All Middle Fabrics - Raw Materials - KGs	1	0.04	kg	0.13	10.41 %
Polyester - Edge Tape - Raw Materials - KGs	1	5.49 · 10 <sup>-3</sup>	kg	0.02	1.64 %
Polyester - Label 1 - Raw Materials - KGs	1	5.8 · 10 <sup>-4</sup>	kg	2.14 · 10 <sup>-3</sup>	0.17 %
TOTAL				1.24	100.00 %

## Clean Plus Damp Mop

# Climate Change - Manufacturing

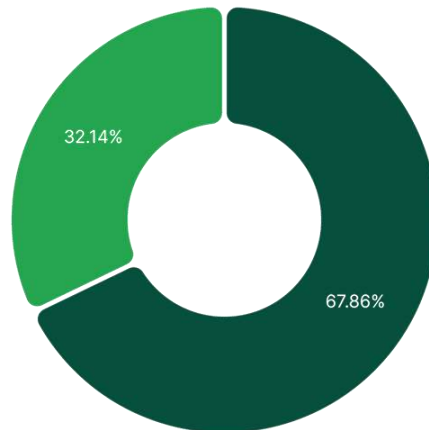


Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Manufacturing – Fibre Production	4	0.19	kg	0.88	89.44 %
Manufacturing – Weaving Fabric	3	0.19	kg	0.1	10.56 %

TOTAL	0.99	100.00 %
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## Clean Plus Damp Mop

# Climate Change - Packaging



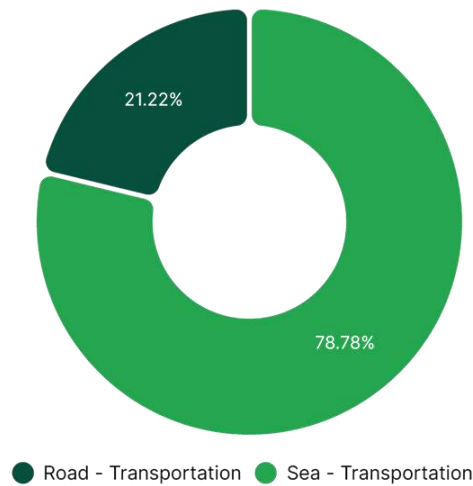
● Cardboard Box - Tertiary Packaging - KGs ● Paper Banner - Secondary Packaging - KGs

Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Cardboard Box – Tertiary Packaging – KGs	6	4.23 · 10 <sup>^</sup> -3	kg	5.36 · 10 <sup>^</sup> -3	67.86 %
Paper Banner – Secondary Packaging – KGs	5	1 · 10 <sup>^</sup> -3	kg	2.53 · 10 <sup>^</sup> -3	32.14 %

TOTAL	7.89 · 10 <sup>-3</sup>	100.00 %
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Clean Plus Damp Mop

# Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Sea - Transportation	8	5	metric_t_km	0.05	78.78 %
Road - Transportation	7	0.08	metric_t_km	0.01	21.22 %

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TOTAL				0.06	100.00 %
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This LCA was carried out by Sustaina Company using the Greenly software. This LCA has not been third party verified.