

**Nordisk Microfiber**

**Life Cycle Assessment  
Cradle to Gate**

**Super Tentax Waffel**

**2025-12-19**

# Summary



## 01 | Methodology



## 02 | Results

# 01

## Methodology

# Environmental Impact Assessment

## Functional unit

The functional unit of this analysis is "Product 'Super Tentax Waffel' (product code: 2215) is made of 75% recycled polyester + 25% polyamide, weighs 0.051 kgs, and is not otherwise certified"

## 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

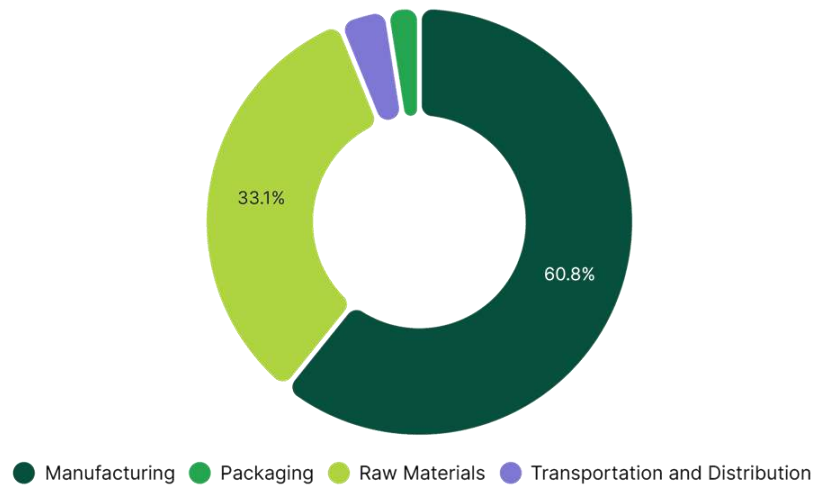
Nu m	Emission Factor	Source	Value	Unit
1	Nylon 6-6   Market for nylon 6-6   Market activity	ECOINVENT 3.12	8.32	kg
2	Polyethylene terephthalate, granulate, amorphous   Market for polyethylene terephthalate, granulate, amorphous   Market activity	ECOINVENT 3.12	3.70	kg
3	Polyethylene terephthalate, pellets, recycled fibre based   Market for polyethylene terephthalate, pellets, recycled fibre based   Market activity	ECOINVENT 3.12	1.23	kg
4	Fibre, polyester   Polyester fibre production, finished   Ordinary transforming activity	ECOINVENT 3.12	4.78	kg
5	Weaving, synthetic fibre   Market for weaving, synthetic fibre   Market activity	ECOINVENT 3.12	0.56	kg
6	Corrugated board box   Market for corrugated board box   Market activity	ECOINVENT 3.12	1.27	kg
7	Packaging film, low density polyethylene   Market for packaging film, low density polyethylene   Market activity	ECOINVENT 3.12	3.37	kg
8	Transport, freight, lorry, diesel, unspecified   Market for transport, freight, lorry, unspecified   Market activity	ECOINVENT 3.12	0.16	metric_t_km
9	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

Super Tentax Waffel

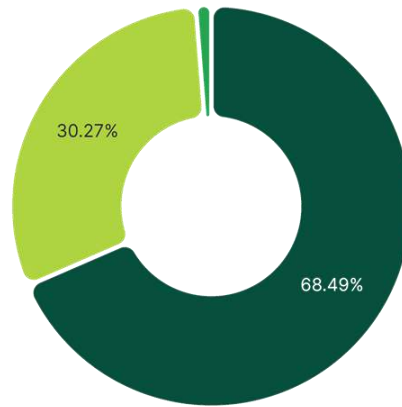
# Climate Change



Step	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Manufacturing	0.27	60.79 %
Raw Materials	0.15	33.06 %
Transportation and Distribution	0.02	3.67 %
Packaging	0.01	2.48 %
TOTAL	0.45	100.00 %

## Super Tentax Waffel

# Climate Change - Raw Materials

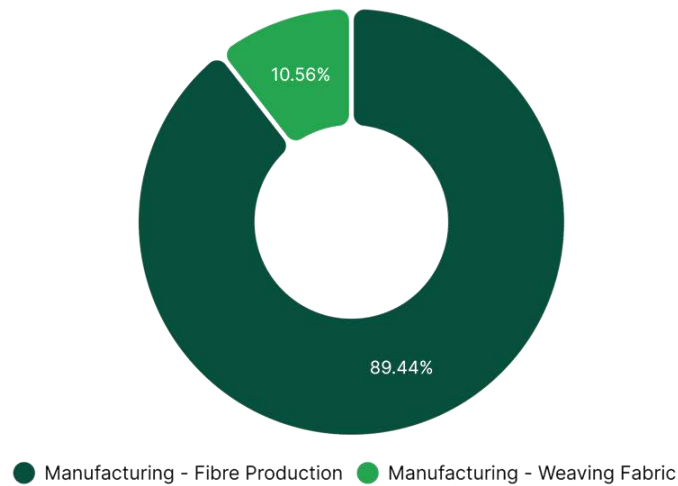


 Polyamide - Main Fabric - Raw Materials - KGs
  Polyester - Label 1 - Raw Materials - KGs  
 Recycled Polyester - Main Fabric - Raw Materials - KGs

Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Polyamide – Main Fabric – Raw Materials – KGs	1	0.01	kg	0.1	68.49 %
Recycled Polyester – Main Fabric – Raw Materials – KGs	3	0.04	kg	0.05	30.27 %
Polyester – Label 1 – Raw Materials – KGs	2	5 · 10 <sup>-4</sup>	kg	1.85 · 10 <sup>-3</sup>	1.24 %
TOTAL				0.15	100.00 %

Super Tentax Waffel

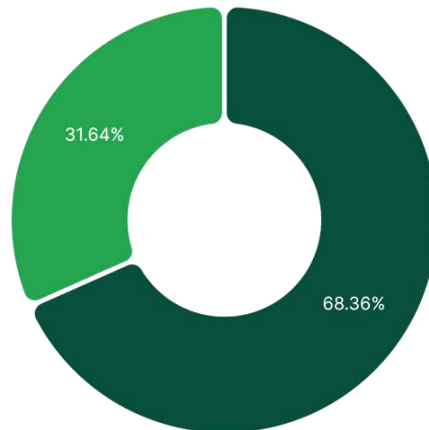
# Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Manufacturing – Fibre Production	4	0.05	kg	0.25	89.44 %
Manufacturing – Weaving Fabric	5	0.05	kg	0.03	10.56 %
TOTAL					0.27 100.00 %

## Super Tentax Waffel

# Climate Change - Packaging



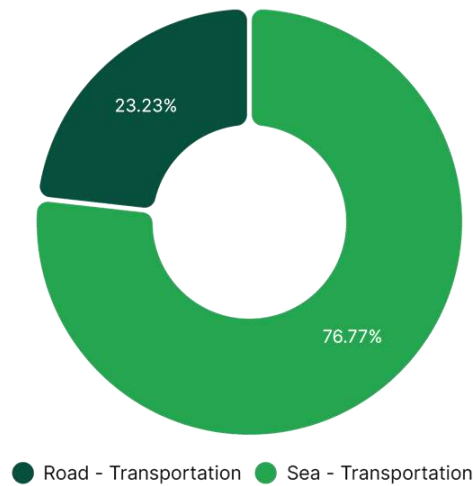
● Cardboard Box - Tertiary Packaging - KGs ● Polyethelyne - Primary Packaging - KGs

Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Cardboard Box – Tertiary Packaging – KGs	6	6.04 · 10 <sup>-3</sup>	kg	7.65 · 10 <sup>-3</sup>	68.36 %
Polyethelyne – Primary Packaging – KGs	7	1.05 · 10 <sup>-3</sup>	kg	3.54 · 10 <sup>-3</sup>	31.64 %

TOTAL	0.01	100.00 %
-------	------	----------

Super Tentax Waffel

# Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Sea - Transportation	9	1.32	metric_t_km	0.01	76.77 %
Road - Transportation	8	0.02	metric_t_km	3.84 · 10 <sup>-3</sup>	23.23 %

--

--

TOTAL				0.02	100.00 %
-------	--	--	--	------	----------

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