



**Nordisk Microfiber**

# **Life Cycle Assessment Cradle to Gate**

**Tentax Ultra Shine Glas, 40x40 cm**

**2025-12-19**

# Summary



## 01 | Methodology



## 02 | Results

# 01

## Methodology

# Environmental Impact Assessment

## Functional unit

The functional unit of this analysis is "Product 'Tentax Ultra Shine Glas, 40x40 cm' (product code: MIG-4040-B) is made of 82% recycled polyester + 18% polyamide, weighs 0.050 kgs, and is certified under GRS / Swan Ecolabel"

## 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

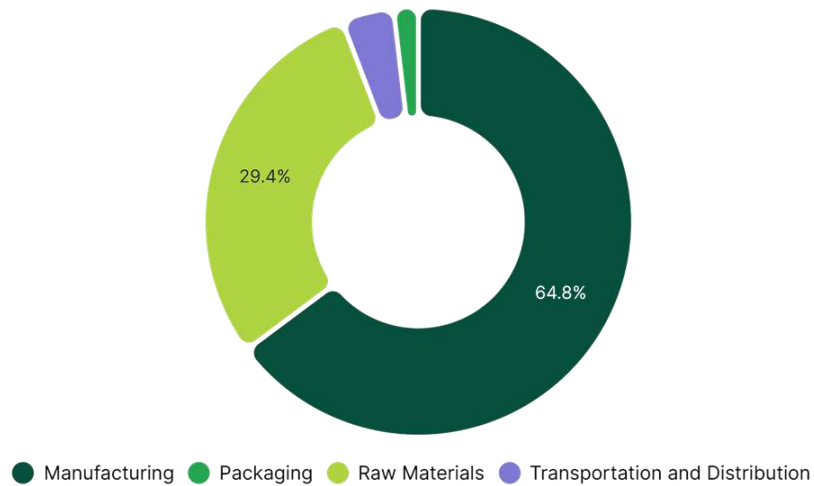
Nu m	Emission Factor	Source	Value	Unit
1	Polyethylene terephthalate, pellets, recycled fibre based   Market for polyethylene terephthalate, pellets, recycled fibre based   Market activity	ECOINVENT 3.12	1.23	kg
2	Polyethylene terephthalate, granulate, amorphous   Market for polyethylene terephthalate,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

# 02

## Results

Tentax Ultra Shine Glas, 40x40 cm

# Climate Change

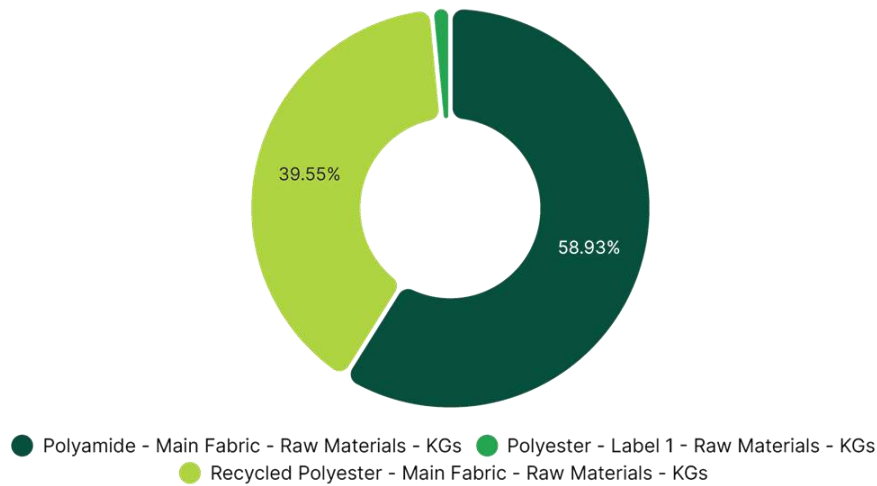


Step	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Manufacturing	0.27	64.81 %
Raw Materials	0.12	29.41 %
Transportation and Distribution	0.02	3.93 %
Packaging	7.68 · 10 <sup>-3</sup>	1.85 %
TOTAL	0.41	100.00 %



Tentax Ultra Shine Glas, 40x40 cm

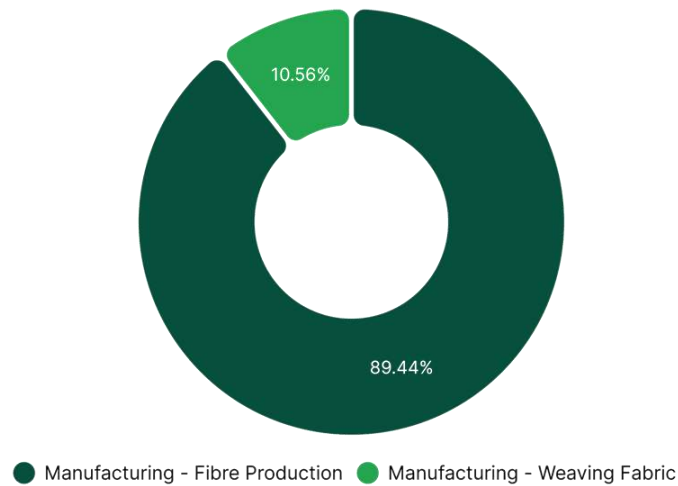
# Climate Change - Raw Materials



Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Polyamide – Main Fabric – Raw Materials – KGs	3	$8.64 \cdot 10^{-3}$	kg	0.07	58.93 %
Recycled Polyester – Main Fabric – Raw Materials – KGs	1	0.04	kg	0.05	39.55 %
Polyester – Label 1 – Raw Materials – KGs	2	$5 \cdot 10^{-4}$	kg	$1.85 \cdot 10^{-3}$	1.52 %
TOTAL				0.12	100.00 %

Tentax Ultra Shine Glas, 40x40 cm

# Climate Change - Manufacturing

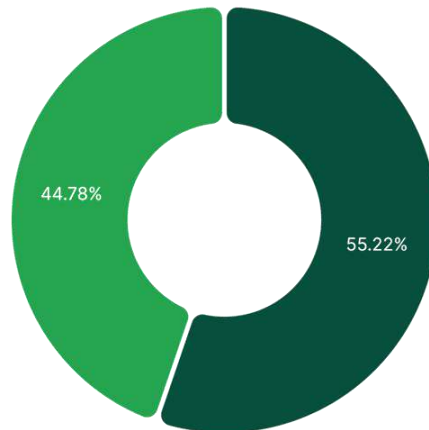


Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Manufacturing – Fibre Production	5	0.05	kg	0.24	89.44 %
Manufacturing – Weaving Fabric	4	0.05	kg	0.03	10.56 %

TOTAL	0.27	100.00 %
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Tentax Ultra Shine Glas, 40x40 cm

# 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	7	$3.35 \cdot 10^{-3}$	kg	$4.24 \cdot 10^{-3}$	55.22 %
Polyethelyne - Primary Packaging - KGs	6	$1.02 \cdot 10^{-3}$	kg	$3.44 \cdot 10^{-3}$	44.78 %

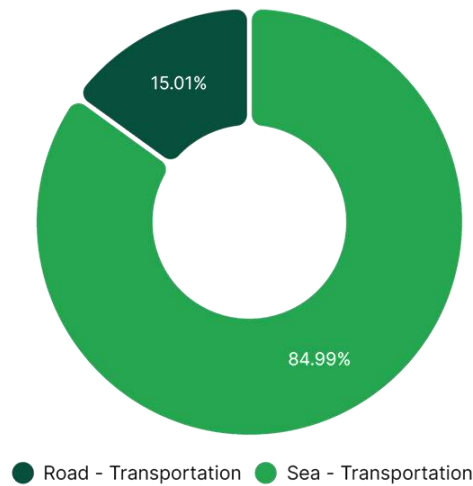
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TOTAL				$7.68 \cdot 10^{-3}$	100.00 %
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Tentax Ultra Shine Glas, 40x40 cm

# Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Unit	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Sea - Transportation	8	1.44	metric_t_km	0.01	84.99 %
Road - Transportation	9	0.02	metric_t_km	2.44 · 10 <sup>-3</sup>	15.01 %

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TOTAL				0.02	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.