

## OP'VISIO OGT

P700BRY

### Composition:

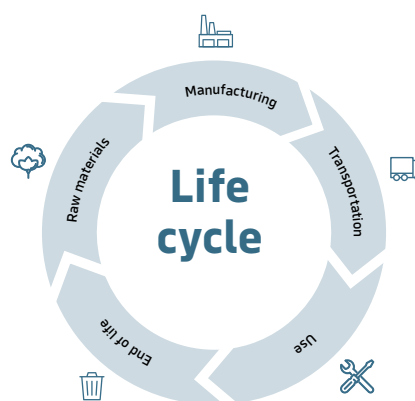
- Temples: 100% recycled polycarbonate
- Lens: clear polycarbonate

**Packaging:** 100% recycled plastic bag



## Life Cycle Assessment (LCA) / Eco-design

**Life Cycle Assessment (LCA)** is a standardised method for assessing the environmental impact of a product throughout its life cycle, from the production of the raw materials to the end of its life. This method takes into account 16 indicators (climate change, water use, etc.). The results enable us to confirm our eco-design choices.



In order to eco-design the OPSIAL OP'VISIO OGT glasses, we carried out an LCA of standard OPSIAL OP'VISIO glasses (made from non-recycled materials).

The results for two main indicators, climate change and water use, show that the raw materials production phase is the one which has the biggest impact.

### Climate change (kg CO<sub>2</sub> -eq)



#### RAW MATERIALS

61%



#### MANUFACTURING

24%



#### TRANSPORTATION

3%



#### USE

9%



#### END OF LIFE

3%



### Water use (m<sup>3</sup> world -eq.)



#### RAW MATERIALS

52%



#### MANUFACTURING

6%



#### TRANSPORTATION

<1%



#### USE

40%



#### END OF LIFE

1%



We therefore started to work on the raw materials, selecting recycled materials (product + packaging).

Eco-design has enabled us to reduce the environmental impact of OP'VISIO OGT\* glasses compared to the standard\*\* OPSIAL model for two main indicators:



### Climate change

**-29%**



### Water use

**-24%**

\*One size

\*\*OP'VISIO model, made of: Lens: polycarbonate / Temples: polycarbonate

## STEP'FOREST OGT P700R76



### Composition:

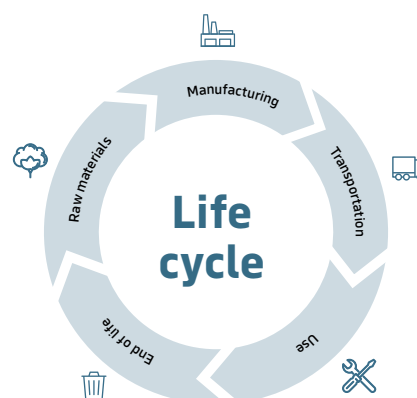
- Leather uppers from LWG-certified tanneries
- Upper made from 15.7% recycled material (excluding toecap)
- Recycled polyester mesh lining
- 100% recycled anti-perforation sole

### Packaging:

- Packaging: recycled kraft
- Printing: vegetable-based inks

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In order to eco-design the OPSIAL STEP'FOREST OGT shoe, we carried out an LCA of the standard OPSIAL STEP'ROC EVOL shoe (made from non-recycled materials).

The results for two main indicators, climate change and water use, show that the production of raw materials and manufacturing phases account for most of the impact.

### Climate change (kg CO<sub>2</sub> -eq)



#### RAW MATERIALS

72%



#### MANUFACTURING

19%



#### TRANSPORTATION

2%



#### USE

0%



#### END OF LIFE

7%



### Water use (m<sup>3</sup> world -eq.)



#### RAW MATERIALS

94%



#### MANUFACTURING

3%



#### TRANSPORTATION

<1%



#### USE

1%



#### END OF LIFE

1%



We therefore started to work on the raw materials, selecting recycled materials (product + packaging).

Eco-design has enabled us to reduce the environmental impact of the STEP'FOREST OGT\* shoe compared to the standard\*\* OPSIAL model for two main indicators:



### Climate change

-2%



### Water use

-11%

\*Size 43

\*\*STEP'ROC EVOL model consisting of: Water-repellent full-grain leather upper / PU outsole

## Methodology

- This life cycle assessment was conducted with a third party using the European Product Environmental Footprint (PEF) methodology.
- Software used: **Ecodesign studio software (version 4.4.1)**
- Database: **Ecoinvent 3.8**
- Calculation period: **04/2024**
- Scope of application: **Cradle to grave: the entire life cycle from extraction of the raw materials to end of life**

### List of the 16 impact categories of the PEF methodology:

- Climate change
- Ozone depletion
- Human toxicity, cancer
- Human toxicity, non-cancer
- Particulate matter
- Ionising radiation
- Photochemical ozone formation
- Acidification
- Eutrophication, marine
- Eutrophication, terrestrial
- Eutrophication, freshwater
- Ecotoxicity, freshwater
- Land use
- Water use
- Resource use, fossils
- Resource use, minerals and metals

### Details for the two indicators studied:

#### Climate change:

This indicator refers to the increase in average global temperatures as result of greenhouse gas (GHG) emissions. The greatest contributor is generally the combustion of fossil fuels such as coal, oil, and natural gas. The global warming potential of all GHG emissions is measured in kilograms of carbon dioxide equivalent (kg CO<sub>2</sub> eq), meaning that all GHGs are compared to the amount of the global warming potential of 1 kg of CO<sub>2</sub>.

#### Water use:

The abstraction of water from lakes, rivers or groundwater can contribute to the 'depletion' of available water. The impact category takes into account the availability or scarcity of water in the regions where the activity takes place, if this information is known. The potential impact is expressed in cubic metres (m<sup>3</sup>) of water use compared to the local scarcity of water.

## HANDLITE OGT NIT P70R89K

### Composition:

- Material: 97% recycled polyester, 3% spandex
- Coating: Foam nitrile + TPU

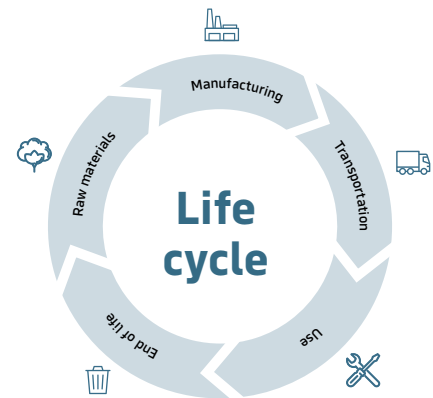
### Packaging:

- Packaging: recycled kraft
- Printing: vegetable-based inks



## Life Cycle Assessment (LCA) / Eco-design

**Life Cycle Assessment (LCA)** is a standardised method for assessing the environmental impact of a product throughout its life cycle, from the production of the raw materials to the end of its life. This method takes into account 16 indicators (climate change, water use, etc.). The results enable us to confirm our eco-design choices.



In order to eco-design the OPSIAL HANDLITE OGT NIT glove, we carried out an LCA of the standard OPSIAL HANDLITE glove (made from non-recycled materials).

The results for two main indicators, climate change and water use, show that the production of raw materials and manufacturing phases account for most of the impact.

### Climate change (kg CO<sub>2</sub> -eq)



#### RAW MATERIALS

46%



#### MANUFACTURING

48%



#### TRANSPORTATION

2%



#### END OF LIFE

4%



### Water use (m<sup>3</sup> world -eq.)



#### RAW MATERIALS

75%



#### MANUFACTURING

23%



#### TRANSPORTATION

1%



#### END OF LIFE

1%



We therefore started to work on the raw materials, selecting recycled materials (product + packaging).

Eco-design has enabled us to reduce the environmental impact of the HANDLITE OGT NIT\* GLOVE compared to the standard\*\* OPSIAL model for two main indicators:



### Climate change

**-19%**



### Water use

**-35%**

\*Size 9

\*\*HANDLITE 410N model made of: Material: 15 gauge black nylon knit / Coating: Black foam nitrile + TPU

## Methodology

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### List of the 16 impact categories of the PEF methodology:

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- Ozone depletion
- Human toxicity, cancer
- Human toxicity, non-cancer
- Particulate matter
- Ionising radiation
- Photochemical ozone formation
- Acidification
- Eutrophication, marine
- Eutrophication, terrestrial
- Eutrophication, freshwater
- Ecotoxicity, freshwater
- Land use
- Water use
- Resource use, fossils
- Resource use, minerals and metals

### Details for the two indicators studied:

#### Climate change:

This indicator refers to the increase in average global temperatures as result of greenhouse gas (GHG) emissions. The greatest contributor is generally the combustion of fossil fuels such as coal, oil, and natural gas. The global warming potential of all GHG emissions is measured in kilograms of carbon dioxide equivalent (kg CO<sub>2</sub> eq), meaning that all GHGs are compared to the amount of the global warming potential of 1 kg of CO<sub>2</sub>.

#### Water use:

The abstraction of water from lakes, rivers or groundwater can contribute to the 'depletion' of available water. The impact category takes into account the availability or scarcity of water in the regions where the activity takes place, if this information is known. The potential impact is expressed in cubic metres (m<sup>3</sup>) of water use compared to the local scarcity of water.

## ACTIV'LINE TROUSERS OGT 250

P700SJH

### Composition:

- Main fabric: 65% organic cotton / 35% recycled polyester, 250 g/m<sup>2</sup>
- Secondary fabric: 100% CORDURA® nylon, 220 g/m<sup>2</sup>

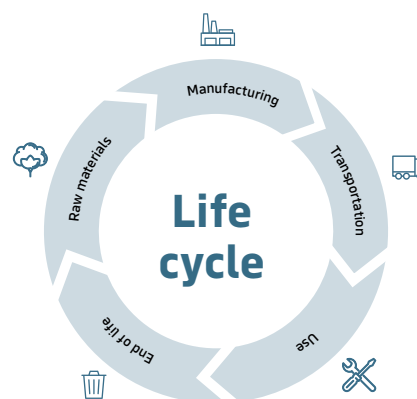
### Packaging:

- Packaging: recycled kraft
- Printing: vegetable-based inks



## Life Cycle Assessment (LCA) / Eco-design

**Life Cycle Assessment (LCA)** is a standardised method for assessing the environmental impact of a product throughout its life cycle, from the production of the raw materials to the end of its life. This method takes into account 16 indicators (climate change, water use, etc.). The results enable us to confirm our eco-design choices.



In order to eco-design the OPSIAL ACTIV'LINE OGT 250 trousers, we carried out an LCA of the standard OPSIAL ACTIV'LINE SUMMER trousers (made from non-recycled materials and conventional cotton).

The results for two main indicators, climate change and water use, show that the raw materials production phase, particularly for cotton, has the biggest impact.

### Climate change (kg CO<sub>2</sub> -eq)



#### RAW MATERIALS

65%



#### MANUFACTURING

14%



#### TRANSPORTATION

2%



#### USE

15%



#### END OF LIFE

4%



### Water use (m<sup>3</sup> world -eq.)



#### RAW MATERIALS

98%



#### MANUFACTURING

<1%



#### TRANSPORTATION

<1%



#### USE

1%



#### END OF LIFE

<1%



We therefore started to work on the raw materials, selecting recycled materials and organic cotton (grown without pesticides, insecticides or chemicals, and using less water). Eco-design has enabled us to reduce the environmental impact of the ACTIV'LINE OGT 250\* trousers compared to the standard\*\* OPSIAL model for two main indicators:



### Climate change

**-24%**



### Water use

**-97%**

\*Men's model - Size 42

\*\*ACTIV'LINE SUMMER model, made of: Main fabric: 65% cotton - 35% polyester CANVAS, 255 g/m<sup>2</sup> / Secondary fabric: 100% Cordura® nylon, 220 g/m<sup>2</sup>

## Methodology

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- Calculation period: **04/2024**
- Scope of application: **Cradle to grave: the entire life cycle from extraction of the raw materials to end of life**

### List of the 16 impact categories of the PEF methodology:

- Climate change
- Ozone depletion
- Human toxicity, cancer
- Human toxicity, non-cancer
- Particulate matter
- Ionising radiation
- Photochemical ozone formation
- Acidification
- Eutrophication, marine
- Eutrophication, terrestrial
- Eutrophication, freshwater
- Ecotoxicity, freshwater
- Land use
- Water use
- Resource use, fossils
- Resource use, minerals and metals

### Details for the two indicators studied:

#### Climate change:

This indicator refers to the increase in average global temperatures as result of greenhouse gas (GHG) emissions. The greatest contributor is generally the combustion of fossil fuels such as coal, oil, and natural gas. The global warming potential of all GHG emissions is measured in kilograms of carbon dioxide equivalent (kg CO<sub>2</sub> eq), meaning that all GHGs are compared to the amount of the global warming potential of 1 kg of CO<sub>2</sub>.

#### Water use:

The abstraction of water from lakes, rivers or groundwater can contribute to the 'depletion' of available water. The impact category takes into account the availability or scarcity of water in the regions where the activity takes place, if this information is known. The potential impact is expressed in cubic metres (m<sup>3</sup>) of water use compared to the local scarcity of water.

## ISAK OGT PARKA

P708PR4

### Composition:

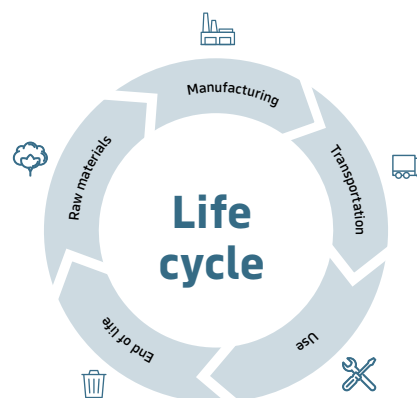
- Outer fabric: 100% recycled nylon
- Padding: 90% recycled polyester, 10% polyester
- Lining: 100% recycled polyester

**Packaging:** 100% recycled plastic bag



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In order to eco-design the ISAK OGT OPSIAL parka, we carried out an LCA of a standard OPSIAL parka (made from non-recycled materials). The results for two main indicators, climate change and water use, show that the raw materials production phase is the one which has the biggest impact.

### Climate change (kg CO<sub>2</sub> -eq)



#### RAW MATERIALS

71%



#### MANUFACTURING

12%



#### TRANSPORTATION

4%



#### USE

4%



#### END OF LIFE

9%



### Water use (m<sup>3</sup> world -eq.)



#### RAW MATERIALS

84%



#### MANUFACTURING

6%



#### TRANSPORTATION

1%



#### USE

8%



#### END OF LIFE

1%



We therefore started to work on the raw materials, selecting recycled materials (product + packaging). Eco-design has enabled us to reduce the environmental impact of the ISAK OGT\* PARKA compared to the standard\*\* OPSIAL model for two main indicators:



### Climate change

**-37%**



### Water use

**-52%**

\*Size L

\*\*TASMAN model, made of: Outer fabric: 100% polyester, PVC-coated / Padding: 100% polyester / Lining: 100% polyester



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