## General information

**Product**

PFXP-EX 500V 3G2.5mm² ER

**Program operator:**

Post Box 5250 Majorstuen, 0303 Oslo, Norway
The Norwegian EPD Foundation
Phone: +47 23 08 80 00
web: post@epd-norge.no

**Declaration number:**
**)%Bk:Ppyb:bppy:%)**

**This declaration is based on Product Category Rules:**

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 027 Part B for Electrical cables and wires

**Statement of liability:**

The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

**Declared unit:**

1 m PFXP-EX 500V 3G2.5mm² ER

**Declared unit with option:**

A1,A2,A3,A4,A5,C1,C2,C3,C4,D

**Functional unit:**

**General information on verification of EPD from EPD tools:**
Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Individualthird party verification of each EPD is not required when the EPD tool is i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPDNorway, and iii)the proccess is reviewed annualy. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools.

**Verification of EPD tool:**

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools. Approval number: NEPDT32.

Third party verifier:

Vito D'Incognito - Take Care International

(no signature required)

**Owner of the declaration:**

Prysmian Group Norge AS
Contact person: Anders Nymark
Phone: +47 90066733
e-mail: anders.nymark@prysmiangroup.com

**Manufacturer:**

Prysmian Group Norge AS
Kjerraten 16 , 3013 Drammen
Norway

**Place of production:**

Prysmian Group production site Oulu (Finland
Johdintie 5 , 90630 Oulu
Finland

**Management system:**

ISO 9001, ISO 14001, ISO 45001

**Organisation no:**

814 780 422

**Issue date:nbpDssDbTbb**

**Valid to:nbpDssDbTbR**

**Year of study:**

2021

**Comparability:**

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

**Development and verification of EPD:**

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway. Approval number: NEPDT33

Developer of EPD:

Siri Andersen

Reviewer of company-specific input data and EPD:

Anders Nymark

**Approved:**

## Product

**Product description:**

Double insulated installation cable. For fixed bedding, in pipes, duct, in or under plaster, cable ladder or suspended in wire. Can be used indoors and outdoors, though not misplaced in the ground or in water. UV-protected for outdoor use. The conductor insulation must be protected against direct UV light which may occur by, for example, connecting in lighting fixtures or light signs.
Cenelec: NO-05XV-U

**Product specification**

Conductor material Copper
Core insulation material XLPE
Drain wire No
Longitudinal water blocking cable No
Radial water blocking cable No
Core identification (acc. HD 308 S2) Yes
Twisted cores No
Armouring No
Screen No
Lead sheath No
Material inner sheath Other
Material outer sheath Polyvinyl chloride (PVC)
Cable shape Round

| Materials | kg | % |
|---|---|---|
| Metal - Copper | 0,06 | 48,23 |
| Plastic - Polyethylene | 0,01 | 7,44 |
| Plastic - Polyvinyl chloride (PVC) | 0,06 | 44,34 |
| Total | 0,13 | |

**Technical data:**

SAP code 20140298
El no. 1000278
IEC 60228 Class 1 conductors
Flame retardant properties.

**Market:**

Nordic
Transport to delivery point (A4), and average waste treatment in end-of-life stage (C2) is considering the Norwegian market. Calculations for other destinations, may be done on request.

**Reference service life, product**

Highly dependent on the conditions of use, estimated to be 30+ years.

**Reference service life, building or construction works**

Standard average service life of buildings and infrastructure 60-100 years, as suggested by NPCR 027.

## LCA: Calculation rules

**Declared unit:**

1 m PFXP-EX 500V 3G2.5mm² ER

**Cut-off criteria:**

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

**Allocation:**

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

**Data quality:**

Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

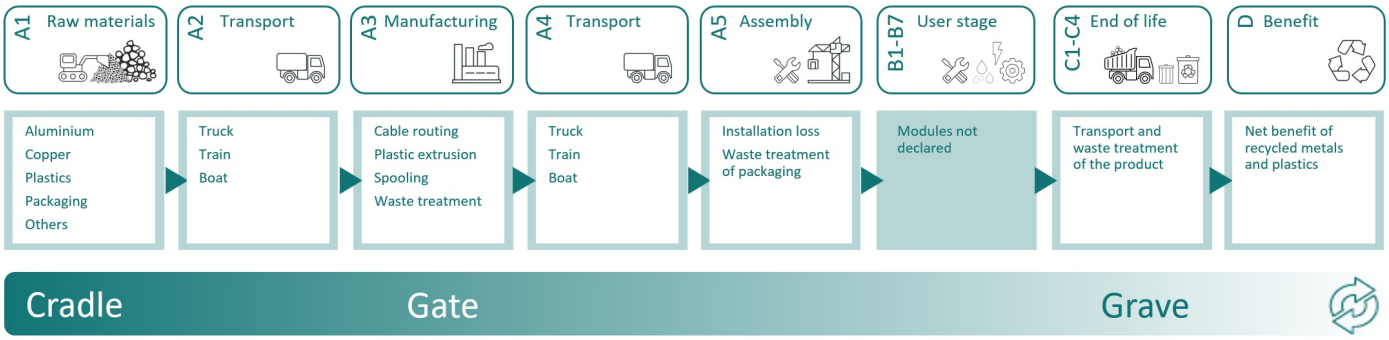
| Materials | Source | Data quality | Year |
|---|---|---|---|
| Metal - Copper | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyethylene | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyvinyl chloride (PVC) | ecoinvent 3.6 | Database | 2019 |

## System boundaries (X=included, MND=module not declared, MNR=module not relevant)

| Product stage | | | Construction installation stage | | Use stage | | | | | | | End of life stage | | | | Beyond the system boundaries |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Raw materials | Transport | Manufacturing | Transport | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| X | X | X | X | X | MND | MND | MND | MND | MND | MND | MND | X | X | X | X | X |

**System boundary:**

The flowchart below illustrates the system boundaries of the analysis:




**Additional technical information:**

Nominal voltage U0 [V] 300
Nominal voltage U [V] 500
Rated voltage U0/U (Um) 300/500 V
Flame retardant In accordance with EN/IEC 60332-1-2
Reaction-to-fire class (acc. EN 13501-6) Eca Max. conductor temperature [°C] 90
Min. outer temperature, fixed installation [°C] -40
Max. outer temperature, fixed installation [°C] 70
UV resistant Yes Outdoor installation Yes Min. outer temperature during installation [°C] -15
Suitable as installation cable Yes
Bending radius (rule) 3xD

## LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

In A4, a transport distance of 1445 km from the Prysmian Group production site in Oulu to Prysmian Group's warehouse in Loesmoen was included. A distance of 300 km was also added as additional transport to market.
Installation (A5) and removal (C1) is assumed to be done with other products such as piping systems and should be assessed at a construction works level.
For B1-B7 the default environmental impact and resource indicators in the EPD are assumed to be zero. In C2, a distance of 300 km has been added as average transport to the Norwegian waste treatment facilities. In C3, datasets are developed for the recycling of metals and plastics and for the incinerations of plastic fractions (including energy recovery and fly ash extraction). All other minor raw materials in the product are assumed to be incinerated. Net benefit of material recycling and energy recovery are given in module D.

| Transport from production place to user (A4) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, 16-32 tonnes, EURO 5 (km) | 36,7 % | 1745 | 0,044 | l/tkm | 76,78 |

| Assembly (A5) | Unit | Value | | | |
|---|---|---|---|---|---|
| Material loss during installation A1-A4 (percentage of cable) | Units/DU | 0,02 | | | |

| Transport to waste processing (C2) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, 16-32 tonnes, EURO 5 (km) | 36,7 % | 300 | 0,044 | l/tkm | 13,20 |

| Waste processing (C3) | Unit | Value | | | |
|---|---|---|---|---|---|
| Copper to recycling (kg) | kg | 0,04 | | | |
| Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg) | kg | 0,03 | | | |
| Waste treatment of polyethylene (PE), incineration with energy recovery and fly ash extraction (kg) | kg | 0,00 | | | |

| Disposal (C4) | Unit | Value | | | |
|---|---|---|---|---|---|
| Landfilling of ashes from incineration of Plastic mixture, process per kg ashes and residues (kg) | kg | 0,00 | | | |
| Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg) | kg | 0,00 | | | |
| Landfilling of copper (kg) | kg | 0,03 | | | |
| Landfilling of plastic mixture (kg) | kg | 0,03 | | | |

| Benefits and loads beyond the system boundaries (D) | Unit | Value | | | |
|---|---|---|---|---|---|
| Substitution of primary copper with net scrap (kg) | kg | 0,01 | | | |
| Substitution of electricity, in Norway (MJ) | MJ | 0,05 | | | |
| Substitution of thermal energy, district heating, in Norway (MJ) | MJ | 0,83 | | | |

## LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

| Environmental impact | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | GWP-total | kg $CO_2$ -eq | 7,34E-01 | 3,99E-02 | 2,59E-02 | 3,88E-02 | 1,68E-02 | 0 | 6,67E-03 | 8,42E-02 | 4,29E-03 | -1,76E-02 |
| | GWP-fossil | kg $CO_2$ -eq | 7,23E-01 | 3,99E-02 | 2,42E-02 | 3,87E-02 | 1,65E-02 | 0 | 6,66E-03 | 8,42E-02 | 4,29E-03 | -1,73E-02 |
| | GWP-biogenic | kg $CO_2$ -eq | 1,04E-02 | 1,67E-05 | 1,54E-03 | 1,58E-05 | 2,39E-04 | 0 | 2,72E-06 | 1,63E-06 | 3,55E-07 | -6,82E-05 |
| | GWP-luluc | kg $CO_2$ -eq | 6,61E-04 | 1,36E-05 | 1,89E-04 | 1,35E-05 | 1,75E-05 | 0 | 2,33E-06 | 2,99E-07 | 2,21E-07 | -1,78E-04 |
| | ODP | kg CFC11 -eq | 8,61E-08 | 9,05E-09 | 2,49E-09 | 8,83E-09 | 2,13E-09 | 0 | 1,52E-09 | 1,62E-10 | 2,10E-10 | -3,49E-04 |
| | AP | mol H+ -eq | 4,62E-02 | 1,76E-04 | 8,12E-05 | 1,58E-04 | 9,31E-04 | 0 | 2,72E-05 | 1,71E-05 | 5,54E-06 | -2,14E-03 |
| | EP-FreshWater | kg P -eq | 3,70E-04 | 3,22E-07 | 7,82E-07 | 3,04E-07 | 7,43E-06 | 0 | 5,23E-08 | 1,45E-08 | 1,03E-08 | -1,46E-05 |
| | EP-Marine | kg N -eq | 2,33E-03 | 5,46E-05 | 1,64E-05 | 4,70E-05 | 4,89E-05 | 0 | 8,07E-06 | 8,16E-06 | 6,05E-06 | -9,94E-05 |
| | EP-Terrestial | mol N eq | 3,42E-02 | 6,03E-04 | 1,72E-04 | 5,19E-04 | 7,10E-04 | 0 | 8,93E-05 | 8,42E-05 | 2,22E-05 | -1,48E-03 |
| | POCP | kg NMVOC -eq | 9,24E-03 | 1,84E-04 | 4,43E-05 | 1,59E-04 | 1,93E-04 | 0 | 2,73E-05 | 2,03E-05 | 7,12E-06 | -4,03E-04 |
| | ADP-minerals&metals[1] | Kg Sb-eq | 1,93E-03 | 9,31E-07 | 1,50E-07 | 1,05E-06 | 3,87E-05 | 0 | 1,80E-07 | 8,11E-09 | 5,44E-09 | -1,18E-05 |
| | ADP-fossil[1] | MJ | 1,04E+01 | 6,04E-01 | 5,31E-01 | 5,84E-01 | 2,43E-01 | 0 | 1,00E-01 | 1,05E-02 | 1,64E-02 | -1,80E-01 |
| | WDP[1] | $m^3$ | 1,77E+01 | 5,39E-01 | 2,91E+01 | 5,57E-01 | 9,57E-01 | 0 | 9,58E-02 | 7,10E-02 | 2,86E-01 | -1,66E-01 |

GWP total Global Warming Potential total; GWP fossil Global Warming Potential fossil fuels ; GWP biogenic Global Warming Potential biogenic; GWP luluc Global W Potential land use change; ODP Ozone Depletion; AP Acidification; EP freshwater Eutrophication aquatic freshwater; EP marine Eutrophication aquatic marine; EP terrestrial Eutrophication terrestrial ;POCP Photochemical zone formation; ADPE Abiotic Depletion Potential minerals and metals; ADPf Abiotic Depletion Potential fossil fuels;

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

**Remarks to environmental impacts**

| Additional environmental impact indicators | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | | **Unit** | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | PM | Disease incidence | 1,13E-07 | 3,12E-09 | 3,94E-10 | 2,79E-09 | 2,39E-09 | 0 | 4,80E-10 | 7,40E-11 | 1,03E-10 | -6,60E-09 |
| | IRP[2] | kgBq U235 eq. | 2,95E-02 | 2,64E-03 | 1,29E-02 | 2,55E-03 | 9,51E-04 | 0 | 4,39E-04 | 2,56E-05 | 9,51E-05 | -5,76E-04 |
| | ETP-fw[1] | CTUe | 4,51E+02 | 4,49E-01 | 4,06E-01 | 4,30E-01 | 9,05E+00 | 0 | 7,40E-02 | 1,50E-01 | 1,58E+01 | -1,97E+01 |
| | HTP-c[1] | CTUh | 6,21E-09 | 0,00E+00 | 1,10E-11 | 0,00E+00 | 1,24E-10 | 0 | 0,00E+00 | 4,00E-12 | 1,00E-12 | -2,80E-10 |
| | HTP-nc[1] | CTUh | 5,13E-07 | 4,78E-10 | 3,10E-10 | 4,65E-10 | 1,03E-08 | 0 | 8,00E-11 | 1,95E-10 | 1,90E-11 | -2,38E-08 |
| | SQP[1] | Pt | 6,71E+00 | 4,97E-01 | 3,25E-01 | 4,03E-01 | 1,59E-01 | 0 | 6,92E-02 | 1,86E-03 | 4,47E-02 | -7,03E-01 |

PM Particulate Matter emissions; IRP Ionizing radiation – human health; ETP-fw Eco toxicity – freshwater; HTP-c Human toxicity – cancer effects; HTP-nc Human toxicity – non cancer effects; SQP Soil Quality (dimensionless)

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

| Resource use | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | PERE | MJ | 1,56E+00 | 8,57E-03 | 1,63E-01 | 8,24E-03 | 3,49E-02 | 0 | 1,42E-03 | 5,59E-04 | 1,55E-03 | -4,68E-01 |
| | PERM | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | PERT | MJ | 1,56E+00 | 8,57E-03 | 1,63E-01 | 8,24E-03 | 3,49E-02 | 0 | 1,42E-03 | 5,59E-04 | 1,55E-03 | -4,68E-01 |
| | PENRE | MJ | 8,76E+00 | 6,04E-01 | 5,50E-01 | 5,84E-01 | 2,10E-01 | 0 | 1,00E-01 | 1,05E-02 | 1,64E-02 | -1,80E-01 |
| | PENRM | MJ | 1,70E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 3,41E-02 | 0 | 0,00E+00 | -1,64E+00 | 0,00E+00 | 0,00E+00 |
| | PENRT | MJ | 1,05E+01 | 6,04E-01 | 5,50E-01 | 5,84E-01 | 2,44E-01 | 0 | 1,00E-01 | -1,63E+00 | 1,64E-02 | -4,76E-01 |
| | SM | kg | 3,49E-02 | 0,00E+00 | 2,24E-04 | 0,00E+00 | 7,02E-04 | 0 | 0,00E+00 | 0,00E+00 | 1,39E-04 | 3,67E-03 |
| | RSF | MJ | 2,24E-02 | 2,95E-04 | 1,92E-03 | 2,95E-04 | 4,97E-04 | 0 | 5,07E-05 | 1,22E-05 | 3,22E-05 | 2,75E-04 |
| | NRSF | MJ | 9,55E-03 | 1,11E-03 | 6,11E-03 | 1,05E-03 | 3,56E-04 | 0 | 1,81E-04 | -6,12E-05 | 2,21E-05 | -2,43E-02 |
| | FW | $m^3$ | 1,10E-02 | 6,68E-05 | 7,44E-04 | 6,15E-05 | 2,37E-04 | 0 | 1,06E-05 | 8,34E-05 | 2,10E-05 | -8,16E-04 |

PERE Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM Use of renewable primary energy resources used as raw materials; PERT Total use of renewable primary energy resources; PENRE Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM Use of non renewable primary energy resources used as raw materials; PENRT Total use of non renewable primary energy resources; SM Use of secondary materials; RSF Use of renewable secondary fuels; NRSF Use of non renewable secondary fuels; FW Use of net fresh water

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## End of life - Waste

| Parameter | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HWD | kg | 4,51E-03 | 3,24E-05 | 2,84E-03 | 2,98E-05 | 1,48E-04 | 0 | 5,12E-06 | 4,27E-06 | 1,13E-03 | -1,45E-04 |
| | NHWD | kg | 1,73E-01 | 3,51E-02 | 4,24E-03 | 2,79E-02 | 4,80E-03 | 0 | 4,80E-03 | 2,14E-04 | 6,02E-02 | -7,66E-03 |
| | RWD | kg | 2,93E-05 | 4,11E-06 | 5,92E-06 | 3,98E-06 | 8,67E-07 | 0 | 6,85E-07 | 2,96E-08 | 1,12E-07 | -4,84E-07 |

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed;

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## End of life - Output flow

| Parameter | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CRU | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | MFR | kg | 1,28E-05 | 0,00E+00 | 2,10E-04 | 0,00E+00 | 4,46E-06 | 0 | 0,00E+00 | 3,83E-02 | 3,33E-06 | -1,44E-04 |
| | MER | kg | 3,00E-05 | 0,00E+00 | 1,91E-05 | 0,00E+00 | 9,81E-07 | 0 | 0,00E+00 | 1,28E-07 | 3,30E-06 | -1,89E-05 |
| | EEE | MJ | 5,57E-05 | 0,00E+00 | 7,48E-03 | 0,00E+00 | 1,51E-04 | 0 | 0,00E+00 | 5,46E-02 | 3,35E-05 | -4,63E-05 |
| | EET | MJ | 8,43E-04 | 0,00E+00 | 1,13E-01 | 0,00E+00 | 2,28E-03 | 0 | 0,00E+00 | 8,25E-01 | 5,06E-04 | -7,01E-04 |

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported energy Thermal

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## Biogenic Carbon Content

| Parameter | Unit | At the factory gate |
|---|---|---|
| Biogenic carbon content in product | kg C | 0,00E+00 |
| Biogenic carbon content in accompanying packaging | kg C | 0,00E+00 |

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

## Additional Norwegian requirements

### Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

| Electricity mix | Data source | Amount | Unit |
|---|---|---|---|
| Electricity, Finland (kWh) | ecoinvent 3.6 | 255,20 | g CO2-eq/kWh |

### Dangerous substances

The product contains no substances given by the REACH Candidate list or the Norwegian priority list.

### Indoor environment

No known impacts on indoor environment.

## Additional Environmental Information

| Environmental impact indicators EN 15804+A1 and NPCR Part A v2.0 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Unit** | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| GWP | kg $CO_2$ -eq | 7,07E-01 | 3,95E-02 | 3,09E-02 | 3,83E-02 | 1,63E-02 | 0 | 6,59E-03 | 8,42E-02 | 3,46E-03 | -1,70E-02 |
| ODP | kg CFC11 -eq | 8,06E-08 | 7,20E-09 | 3,66E-09 | 6,97E-09 | 1,97E-09 | 0 | 1,20E-09 | 1,49E-10 | 1,80E-10 | -1,02E-09 |
| POCP | kg $C_2H_4$-eq | 1,55E-03 | 5,40E-06 | 3,16E-06 | 5,12E-06 | 3,13E-05 | 0 | 8,81E-07 | 2,39E-07 | 6,65E-07 | -7,57E-05 |
| AP | kg $SO_2$ -eq | 3,91E-02 | 8,81E-05 | 6,40E-05 | 7,61E-05 | 7,87E-04 | 0 | 1,31E-05 | 1,19E-05 | 2,31E-06 | -1,83E-03 |
| EP | kg $PO_4^{3-}$ -eq | 2,01E-03 | 1,08E-05 | 9,62E-06 | 8,12E-06 | 4,07E-05 | 0 | 1,40E-06 | 3,99E-06 | 2,20E-06 | -8,37E-05 |
| ADPM | kg Sb -eq | 1,93E-03 | 9,31E-07 | 1,50E-07 | 1,05E-06 | 3,87E-05 | 0 | 1,80E-07 | 8,11E-09 | 5,80E-09 | -1,18E-05 |
| ADPE | MJ | 9,47E+00 | 5,92E-01 | 5,55E-01 | 5,72E-01 | 2,24E-01 | 0 | 9,84E-02 | 1,05E-02 | 1,53E-02 | -1,70E-01 |
| GWPIOBC | kg $CO_2$ -eq | 7,32E-01 | 3,99E-02 | 2,30E-02 | 3,88E-02 | 1,67E-02 | 0 | 6,67E-03 | 8,42E-02 | 5,37E-04 | -1,08E-02 |

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources; GWP-IOBC/GHG Global warming potential calculated according to the principle of instantanious oxidation (except emissions and uptake of biogenic carbon)

## Bibliography

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ISO 14044:2006. Environmental management - Life cycle assessment - Requirements and guidelines. International Organization for Standardization.
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