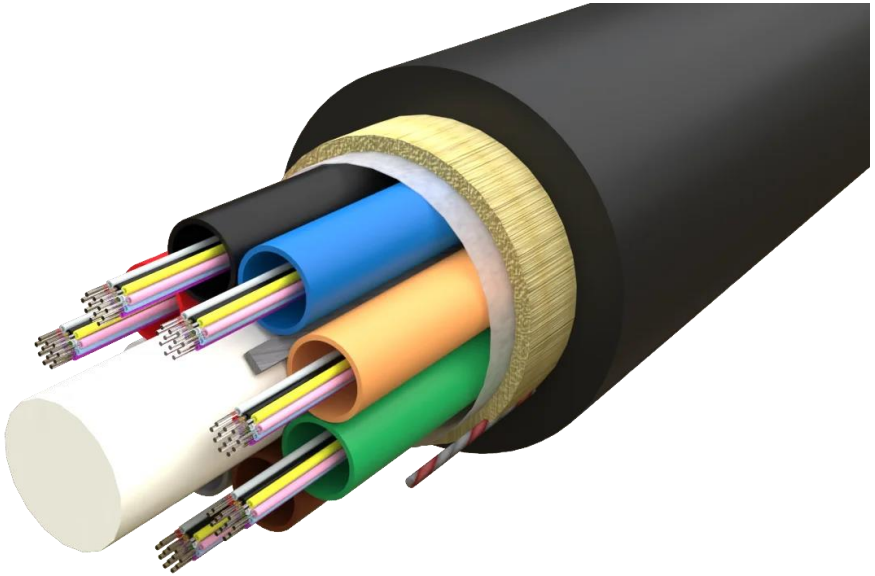
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

12-576F Duct lite cable
Melbye AS



Published on 27 March 2025 - 26 March 2028

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Melbye As
Address	Prost Stabels Vei 22, 2019 Skedsmokorset, Norway
Contact details	kontakt@melbye.no
Website	https://melbye.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Manufactured product
Category of EPD	Self-certified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Aditya Dharmendra Nishad
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☑ Internal verification ☐ External verification
EPD verifier	#VERIFIER#

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	48F Duct lite cable
Additional labels	See appendix
Product reference	12F Duct lite cable, 24F Duct lite cable, 48F Duct lite cable, 96F Duct lite cable, 144F Duct lite cable, 192F Duct lite cable, 288F Duct lite cable, 384F Duct lite cable, 480F Duct lite cable, 576F Duct lite cable
Place(s) of raw material origin	
Place of production	Sterlite Technologies Limited, Survey no. 68/1, Madhuban Dam Rd, Rakholi, Silvassa, Dadra and Nagar Haveli and Daman and Diu 396240
Place(s) of installation and use	
Period for data	1st January 2023 - 31st December 2023
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	30.8

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 Unit
Declared unit mass	69 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	6.39E+02
GWP-total, A1-A3 ($kgCO_2e$)	5.76E+02
Secondary material, inputs (%)	0.98
Secondary material, outputs (%)	19.9
Total energy use, A1-A3 (kWh)	2410
Net freshwater use, A1-A3 (m^3)	6.11

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Melbye As is one of Norway's oldest family-owned companies, with a history dating all the way back to 1907. We have a proud tradition of technical innovation and trade, and today, we are a leading provider of forward-thinking products and system solutions for critical infrastructure. We have expertise within transmission and utilities, fiber, ducts and chambers and safety.

We serve customers throughout the Nordic region and the United Kingdom, engage with stakeholders across Europe, and collaborate with around 200 partners and suppliers.

While our headquarters are located just outside Oslo, Norway, we also have offices at multiple locations in Norway, Sweden, and the United Kingdom, as well as representatives in Finland, India and China. Together, we are more than 120 co-workers who share the company's core values: Innovation, teamwork, and professionalism.

With advanced expertise spread across our core areas and a dedication to long-term operation and future-oriented development, we stand at the forefront of addressing future challenges. We take pride in contributing to the development of critical infrastructure that will shape tomorrow's society.

PRODUCT DESCRIPTION

The 48F Duct Lite Cable is a compact, lightweight optical fiber cable engineered specifically for underground duct installations in access and distribution networks. Ideal for urban deployments, this cable is optimized for both air-blown and pulled installations through microducts or conventional ducts, offering a cost-effective and efficient solution for high-density fiber optic networks.

At its core, the cable features a central loose tube housing 48 optical fibers, protected by a filling gel that safeguards against water ingress and ensures long-term optical performance. Surrounding the tube, dry water-blocking yarns provide additional moisture resistance while allowing for clean and easy splicing during installation.

Fully dielectric in design, the cable contains no metallic components, making it immune to electromagnetic interference and safe for installation alongside power infrastructure. A durable, UV-stabilized black HDPE outer sheath provides excellent resistance to mechanical abrasion and environmental exposure.

With a nominal outer diameter of 9.4 mm and an approximate weight of 70 kg/km, the 48F Duct Lite Cable offers exceptional handling characteristics, low friction for efficient duct blowing, and high duct-fill efficiency — making it an ideal choice for high-capacity, space-sensitive fiber deployments.

This EPD covers the products:

12F Duct lite cable,
24F Duct lite cable,
48F Duct lite cable,
96F Duct lite cable,
144F Duct lite cable,
192F Duct lite cable,
288F Duct lite cable,
384F Duct lite cable,
480F Duct lite cable,
576F Duct lite cable

In the annex to this EPD, a scaling table is provided to reflect the GWP impacts for the range of products produced in the same plant.

Further information can be found at:
https://melbye.com/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	
Minerals	100	India
Fossil materials		
Bio-based materials		

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	17.41

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Unit
Mass per declared unit	69 kg
Functional unit	
Reference service life	25 Years

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
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		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

The cable is manufactured entirely in-house, the facility operates on a combination of renewable and conventional energy sources.

The manufacturing waste is estimated at 2% of raw material input. This waste includes material losses from production. All waste is collected and 100% recycled, recyclable waste is sent to recycling facilities average 250 km distance is considered.

After production, the cables are packed on wooden drums, which is outsourced.

The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

A4 – Transportation to Construction Site

The transportation impacts from the final product delivery to the construction site (A4) include direct fuel combustion emissions, environmental impacts from fuel production, and associated infrastructure emissions. Duct lite cables are primarily used in Norway and Sweden. Accordingly, the shipping distance and the distance from the port to the customer, is an average of 100 km.

A5 – Installation Phase

Material loss during installation is minimal due to the careful handling required for duct lite cables to avoid damage. The cables are installed using specialized manual tools, and no additional installation materials are necessary. An energy consumption of 0.01 kWh/kg has been considered as a standard assumption for installation energy use, reflecting the slightly higher

energy demand compared to metal connectors due to the delicate installation process.

A5 – End-of-Life Waste Management
The average transportation distance to the recycling and disposal facility is assumed to be 250 km and 50 km respectively, carried out by a lorry (>32 metric tons, EURO 5 standard). Packaging materials, including plastic and wooden drum, are separated for recycling where possible and incinerated with energy and heat recovery benefits accounted for as per relevant EU waste management scenarios.

PRODUCT USE AND MAINTENANCE (B1-B7)

This is not in scope of this EPD
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Removal of the product is done manually. However, a standardized energy consumption of 0.01 kWh/kg is considered for the removal process (energy used during de-installation).

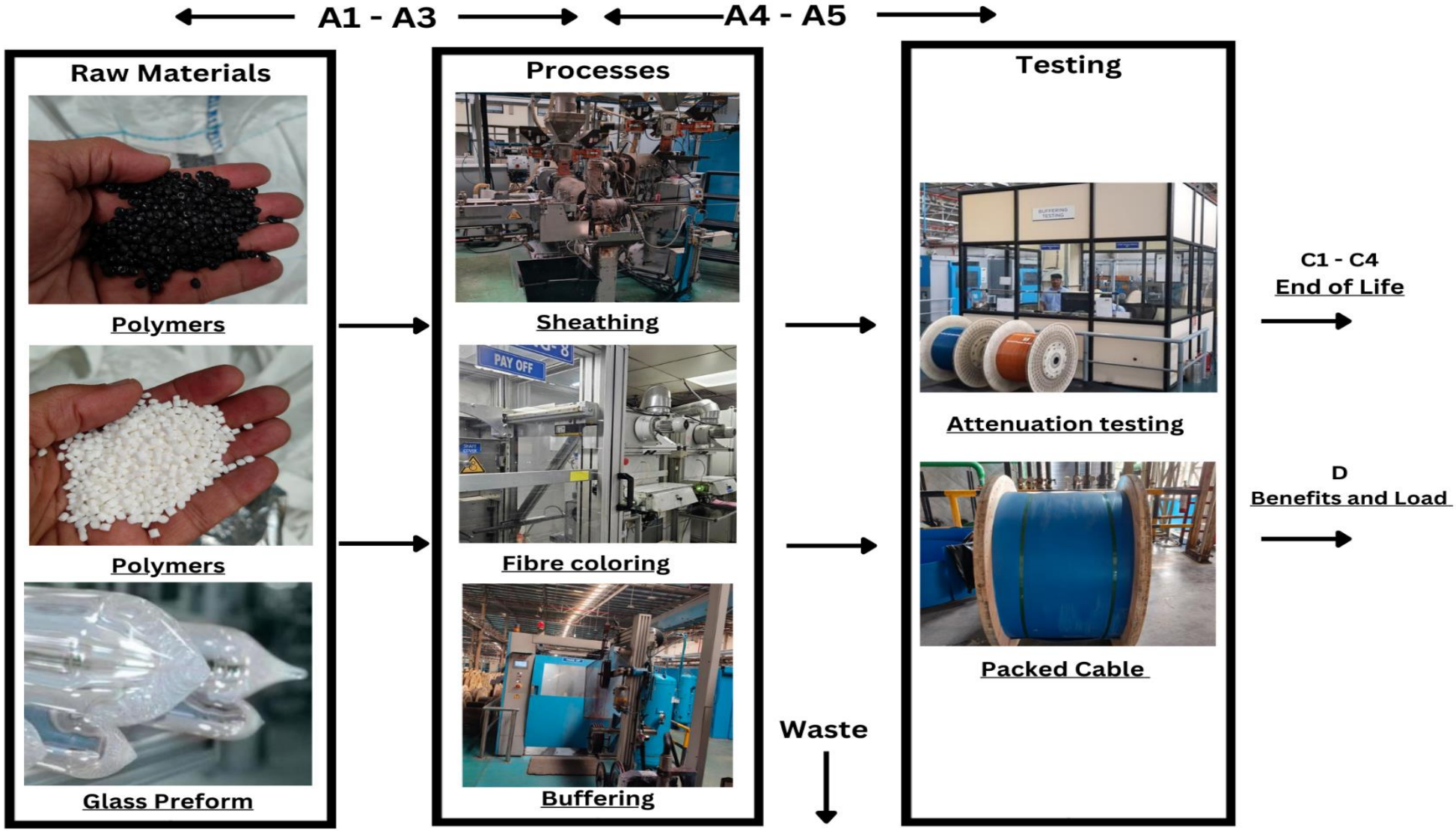
The product is used in Norway and Sweden. For end-of-life transport to recycling facilities, lorry transport (16–32 metric tons, EURO 5) over an average distance of 250 km for recycling and 50 km for landfill is considered.

Relevant materials are sent to recycling facilities in Norway and Sweden, and some amount is landfilled and incinerated depending on local disposal practices.

Module D – Packaging Waste Recovery:

For the untreated wooden wheel used in packaging, incineration with energy and heat recovery is accounted for according to the Wood Packaging EU scenario.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Partly allocated by mass or volume
Packaging material	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	2.47E+02	4.69E+01	2.82E+02	5.76E+02	8.42E+01	7.10E+01	MND	MND	MND	MND	MND	MND	MND	2.49E-01	9.69E-01	8.76E+01	1.28E+01	-6.32E+01
GWP – fossil	kg CO_2e	2.47E+02	4.69E+01	3.45E+02	6.39E+02	8.41E+01	7.17E+00	MND	MND	MND	MND	MND	MND	MND	2.49E-01	9.69E-01	8.76E+01	1.28E+01	-5.49E+01
GWP – biogenic	kg CO_2e	0.00E+00	0.00E+00	-6.39E+01	-6.39E+01	0.00E+00	6.39E+01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.22E+00
GWP – LULUC	kg CO_2e	5.71E-01	2.10E-02	2.69E-01	8.61E-01	3.03E-02	1.26E-03	MND	MND	MND	MND	MND	MND	MND	2.55E-05	4.34E-04	1.69E-03	3.32E-04	-4.75E-02
Ozone depletion pot.	kg CFC_{-11}e	1.40E-04	6.92E-07	2.87E-06	1.44E-04	1.67E-06	1.77E-08	MND	MND	MND	MND	MND	MND	MND	3.81E-09	1.43E-08	2.89E-08	6.47E-09	-1.66E-06
Acidification potential	mol H^+e	1.16E+00	1.60E-01	2.13E+00	3.45E+00	1.76E-01	7.43E-03	MND	MND	MND	MND	MND	MND	MND	2.25E-03	3.30E-03	1.59E-02	2.60E-03	-2.15E-01
EP-freshwater[2)]	kg Pe	4.29E-01	3.65E-03	9.01E-01	1.33E+00	5.67E-03	2.30E-04	MND	MND	MND	MND	MND	MND	MND	7.18E-06	7.54E-05	4.15E-04	-3.51E-01	-1.79E-02
EP-marine	kg Ne	2.52E-01	5.25E-02	3.38E-01	6.43E-01	4.27E-02	6.03E-03	MND	MND	MND	MND	MND	MND	MND	1.04E-03	1.09E-03	7.81E-03	5.10E-03	-3.68E-02
EP-terrestrial	mol Ne	2.28E+00	5.71E-01	3.59E+00	6.44E+00	4.60E-01	3.27E-02	MND	MND	MND	MND	MND	MND	MND	1.14E-02	1.18E-02	6.98E-02	1.61E-02	-3.79E-01
POCP ("smog")[3)]	kg NMVOCe	8.50E-01	2.35E-01	1.02E+00	2.11E+00	2.93E-01	1.02E-02	MND	MND	MND	MND	MND	MND	MND	3.40E-03	4.87E-03	1.85E-02	5.45E-03	-2.39E-01
ADP-minerals & metals[4)]	kg Sbe	2.67E-03	1.31E-04	5.71E-04	3.37E-03	2.80E-04	3.41E-06	MND	MND	MND	MND	MND	MND	MND	8.92E-08	2.70E-06	1.28E-05	1.25E-06	-3.28E-04
ADP-fossil resources	MJ	5.70E+03	6.80E+02	4.29E+03	1.07E+04	1.18E+03	1.53E+01	MND	MND	MND	MND	MND	MND	MND	3.25E+00	1.41E+01	2.18E+01	-1.85E+01	-1.47E+03
Water use[5)]	m^3e depr.	1.44E+02	3.36E+00	1.71E+02	3.18E+02	5.88E+00	4.46E-01	MND	MND	MND	MND	MND	MND	MND	8.13E-03	6.95E-02	2.38E+00	1.47E-01	-1.66E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1.16E-05	4.69E-06	9.69E-06	2.60E-05	6.22E-06	1.47E-07	MND	MND	MND	MND	MND	MND	MND	6.38E-08	9.70E-08	1.23E-07	6.94E-08	-1.51E-06
Ionizing radiation[6)]	kBq U235e	7.18E+00	5.92E-01	1.73E+01	2.50E+01	1.52E+00	3.65E-02	MND	MND	MND	MND	MND	MND	MND	1.44E-03	1.22E-02	7.73E-02	-2.83E-03	-8.48E+00
Ecotoxicity (freshwater)	CTUe	1.93E+03	9.62E+01	1.84E+03	3.87E+03	1.58E+02	6.03E+00	MND	MND	MND	MND	MND	MND	MND	1.79E-01	1.99E+00	3.33E+01	7.02E+00	-2.48E+02
Human toxicity, cancer	CTUh	5.83E-08	7.73E-09	4.67E-08	1.13E-07	1.41E-08	6.86E-10	MND	MND	MND	MND	MND	MND	MND	2.56E-11	1.60E-10	3.97E-09	2.41E-10	-8.17E-09
Human tox. non-cancer	CTUh	1.58E-06	4.40E-07	1.73E-06	3.76E-06	7.49E-07	3.08E-08	MND	MND	MND	MND	MND	MND	MND	4.05E-10	9.10E-09	1.41E-07	3.27E-08	-4.07E-07
SQP[7)]	-	5.14E+02	6.85E+02	5.20E+02	1.72E+03	7.21E+02	1.22E+01	MND	MND	MND	MND	MND	MND	MND	2.28E-01	1.42E+01	1.64E+01	1.22E+01	-1.80E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	1.89E+02	9.32E+00	6.22E+02	8.20E+02	2.07E+01	-2.86E+02	MND	MND	MND	MND	MND	MND	MND	2.06E-02	1.93E-01	1.26E+00	-3.62E+01	-2.30E+01
Renew. PER as material	MJ	2.28E+00	0.00E+00	5.86E+02	5.88E+02	0.00E+00	-5.86E+02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-2.28E+00	0.00E+00	7.85E+01
Total use of renew. PER	MJ	1.91E+02	9.32E+00	1.21E+03	1.41E+03	2.07E+01	-8.72E+02	MND	MND	MND	MND	MND	MND	MND	2.06E-02	1.93E-01	-1.02E+00	-3.62E+01	5.54E+01
Non-re. PER as energy	MJ	3.09E+03	6.80E+02	4.09E+03	7.86E+03	1.18E+03	-1.87E+02	MND	MND	MND	MND	MND	MND	MND	3.25E+00	1.41E+01	-1.67E+03	-7.43E+02	-1.50E+03
Non-re. PER as material	MJ	2.50E+03	0.00E+00	1.18E+02	2.61E+03	0.00E+00	-1.64E+02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-2.45E+03	0.00E+00	6.72E+02
Total use of non-re. PER	MJ	5.58E+03	6.80E+02	4.21E+03	1.05E+04	1.18E+03	-3.51E+02	MND	MND	MND	MND	MND	MND	MND	3.25E+00	1.41E+01	-4.12E+03	-7.43E+02	-8.28E+02
Secondary materials	kg	6.78E-01	2.89E-01	4.03E-01	1.37E+00	5.49E-01	1.56E-02	MND	MND	MND	MND	MND	MND	MND	1.35E-03	5.99E-03	6.87E-02	7.39E-03	1.65E+01
Renew. secondary fuels	MJ	3.00E-01	3.68E-03	2.79E-03	3.07E-01	6.94E-03	1.31E-04	MND	MND	MND	MND	MND	MND	MND	3.53E-06	7.60E-05	4.41E-04	8.37E-05	-1.52E-03
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	2.34E+00	1.01E-01	3.66E+00	6.11E+00	1.61E-01	-2.69E-02	MND	MND	MND	MND	MND	MND	MND	2.15E-04	2.08E-03	2.18E-02	-5.38E-02	-4.95E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.07E+01	1.15E+00	2.51E+01	3.70E+01	1.72E+00	1.33E-01	MND	MND	MND	MND	MND	MND	MND	3.62E-03	2.38E-02	1.09E+00	5.59E-02	-2.89E+00
Non-hazardous waste	kg	2.67E+02	2.13E+01	1.19E+03	1.47E+03	3.63E+01	5.17E+01	MND	MND	MND	MND	MND	MND	MND	4.94E-02	4.41E-01	3.49E+01	8.76E+01	-2.69E+02
Radioactive waste	kg	4.40E-03	1.45E-04	1.55E-02	2.00E-02	3.78E-04	9.15E-06	MND	MND	MND	MND	MND	MND	MND	3.54E-07	3.00E-06	1.97E-05	1.83E-06	-2.16E-03

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.24E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.37E+01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E+01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E+01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.70E+02	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E+01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.33E+02	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	2.39E+02	4.66E+01	3.44E+02	6.29E+02	8.36E+01	7.58E+00	MND	MND	MND	MND	MND	MND	MND	2.47E-01	9.64E-01	8.76E+01	1.51E+01	-5.36E+01
Ozone depletion Pot.	kg $CFC_{-11}e$	9.50E-05	5.52E-07	2.42E-06	9.79E-05	1.33E-06	1.43E-08	MND	MND	MND	MND	MND	MND	MND	3.02E-09	1.14E-08	2.48E-08	3.46E-09	-1.35E-06
Acidification	kg SO_2e	9.73E-01	1.22E-01	1.82E+00	2.92E+00	1.42E-01	5.41E-03	MND	MND	MND	MND	MND	MND	MND	1.58E-03	2.52E-03	1.15E-02	1.68E-03	-1.80E-01
Eutrophication	kg PO_4^3e	4.61E-01	2.97E-02	1.17E+02	1.18E+02	3.57E-02	1.70E-03	MND	MND	MND	MND	MND	MND	MND	3.69E-04	6.15E-04	3.35E-03	1.25E-03	-5.12E-01
POCP (“smog”)	kg C_2H_4e	6.58E-02	1.09E-02	7.70E-02	1.54E-01	1.49E-02	5.40E-04	MND	MND	MND	MND	MND	MND	MND	1.18E-04	2.25E-04	8.50E-04	7.74E-04	-1.78E-02
ADP-elements	kg Sbe	2.56E-03	1.27E-04	5.68E-04	3.25E-03	2.73E-04	3.28E-06	MND	MND	MND	MND	MND	MND	MND	8.67E-08	2.64E-06	1.14E-05	9.81E-07	-3.24E-04
ADP-fossil	MJ	5.44E+03	6.71E+02	3.80E+03	9.91E+03	1.16E+03	1.47E+01	MND	MND	MND	MND	MND	MND	MND	3.23E+00	1.39E+01	2.05E+01	-1.83E+01	-1.32E+03

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	2.47E+02	4.69E+01	3.46E+02	6.40E+02	8.42E+01	7.17E+00	MND	MND	MND	MND	MND	MND	MND	2.49E-01	9.69E-01	8.76E+01	1.28E+01	-5.49E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

SCALING TABLE FOR DIFFERENT TYPES OF Duct lite Cables:

This EPD covers the following listed Duct lite cables:

Sr no.	Duct lite cables	Weight (Kg)	Total number of fiber	GWP-total, (kgCO2e)	GWP-fossil, (kgCO2e)
1	12F Duct lite cable	68.3	12	589.42	589.17
2	24F Duct lite cable	66.4	24	655.96	655.44
3	48F Duct lite cable	69.0	48	832.79	831.89
4	96F Duct lite cable	104.6	96	1,180.71	1,179.12
5	144F Duct lite cable	127.9	144	1,778.4	1,776.02
6	192F Duct lite cable	157.9	192	2,309.42	2,306.24
7	280F Duct lite cable	194.3	280	3,030.15	3,025.51
8	384F Duct lite cable	258.9	384	4,005.48	3,999.53
9	480F Duct lite cable	282.6	480	4,718.19	4,710.94
9	576F Duct lite cable	288.5	576	4,906.95	4,898.85

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity, India, 2021 (One Click LCA)
Electricity CO2e / kWh	1.1
District heating data source and quality	-
District heating CO2e / kWh	-

Transport scenario documentation A4

Scenario parameter	Value
Fuel and vehicle type. Eg, electric truck, diesel powered truck	Market for transport, freight, lorry 16-32 metric ton, EURO6
Average transport distance, km	4683.59
Capacity utilization (including empty return) %	50
Bulk density of transported products	-
Volume capacity utilization factor	1

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	-
Water use / m³	-
Other resource use / kg	-
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	0.69
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	
Direct emissions to ambient air, soil and water / kg	

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

#SIGNATURE#