



**LIFE CYCLE ASSESSMENT
FOR CABLE SUPPORT
SYSTEMS**

as per EN 15804 + A2

cable tray, wire mesh tray, cable ladder and wide span systems

Owner of the declaration

Niedax GmbH & Co. KG
Declaration number: NDX-V01-08025-GB
Declared unit: 1 m cable support system
Issue date: 11.08.2025

Author of the Life Cycle Assessment

FIT-Umwelttechnik GmbH
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1. GENERAL INFORMATION

1. General information

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Declaration number	NDX-V01-08025-GB
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1.1 Calculation and product category rules

The life cycle assessment for the declared product has been prepared in accordance with EN 15804 + A2.

1.2 Declared product

The declared product is the Niedax, cable tray-, wire mesh tray-, cable ladder- and wide span system. The declared unit refers to one metre [1 m]. The declared unit is specified in [kg / m].

1.3 Scope

This document refers to the cable tray-, wire mesh tray-, cable ladder-, and wide span system. Specific data was collected from the manufacturing plant in St. Katharinen, Germany, to prepare the life cycle assessment. Data from 2024, which corresponds to the annual average, was used as a basis. The owner of the declaration is responsible for the underlying information and evidence.

1.4 Aim of the study and target group

The aim of the following study is to prepare a life cycle assessment for the cable tray-, wire mesh tray-, cable ladder- and wide span system of Niedax GmbH & Co. KG in accordance with EN 15804 + A2. The parameters required by the standard are to be recorded for the information modules A1 to A3, C1 to C4 and D.

The study will create transparency regarding the environmental impacts of products and processes within the company and the supply chain. The results of the life cycle assessment will be communicated to the customer.

2. Scope of the study

2.1 Declared unit

The declared product is the cable tray-, wire mesh tray-, cable ladder-, and wide span system from Niedax GmbH & Co. KG. The declared unit refers to 1 m of the cable tray-, wire mesh tray-, cable ladder-, and wide span system, each includes one overhead hanger and one cantilever. The following table shows the data for the declared unit:

Table 1 Data for the declared unit

Designation	Weight [kg/m]
Cable tray system	39.41
Wire mesh tray system	27.92
Cable ladder system	31.51
Wide span system	41.77

The life cycle assessment applies to the following product range. The products included in the assessment are marked in red.

Table 2 Product range

Cable tray system			
Type	Heights [mm]	Widths [mm]	Materials
RL	60, 85, 110	100 - 600	S, F
RLC	60	70 - 600	S, F
RLU	35, 60, 85, 110	100 - 600	S, F
RLUC	60	70 - 600	S
RLV	60	150	S
RLVC	60	100 - 600	S, F
RS	60, 85, 110	100 - 600	S, F
RSBS	110	100 - 600	S
RSSKP	100, 110	100 - 600	S
RSSUP	100, 110	100 - 600	S
RSU	60, 85, 110	100 - 600	S, F
RSUS	60	100 - 600	S

Wire mesh tray system			
Type	Heights [mm]	Widths [mm]	Materials
GR	40, 60	40 - 400	V, F
GRC	78	78 - 518	V
GRCI	68	68 - 318	F
MTC	30, 54 , 105	50 - 600; 200	V, F
MTCG	50	100	V, F
MTCT	75	80	V, F
MTS	54, 105	100 - 600	V, F
Legend:	V = Steel, electro galvanised; S = Steel, pre-galvanised; F = Steel, hot dip galvanised		

2. SCOPE OF THE STUDY

Table 2 Product range

Cable ladder system			
Type	Heights [mm]	Widths [mm]	Materials
KLMUL	40	100 - 1000	F
KRO	60	100 - 600	F
KRC	60	100 - 600	F
KL	60, 100	100 - 600	S, F
KLMZLL	40	100 - 600	F

Wide span system			
Type	Heights [mm]	Widths [mm]	Materials
WRU	105, 120, 200	200 - 600	S, F
WRL	105, 150, 200	200 - 600	S, F
WRLM	150	200 - 600	S, F
WSL	105, 150, 200	200 - 600	S, F
WSLM	150	200 - 600	S, F
WSLSN	200	200 - 600	S, F
WSLS	200	200 - 600	F

Cantilever		
Type	Lengths [mm]	Materials
KTA	110 - 1030	F
KTAM	110 - 610	S, F
KTAS	113 - 630	F
KTASS	230 - 1030	F
KTC	104 - 604	F
KTCL	110 - 210	F
KTDL	125 - 425	S
KTT	110 - 610	F
KTTS	230 - 1030	F
KTTSS	230 - 1030	F
KTU	110 - 610	F
KTUL	105 - 405	S
KTUM	105 - 405	S, F
KTVW	190 - 740	F
KTAL	110 - 310	S
KTAC	118 - 418	S
GTTKS	165 - 265	S
TKS	100 - 400	S
Legend:	V = Steel, electro galvanised; S = Steel, pre-galvanised; F = Steel, hot dip galvanised	

Table 2 Product range

Overhead hanger		
Type	Lengths [mm]	Materials
HDUF 50	205 - 1505	F
HI 80	206 - 2006; 3000	F
HU 5050	205 - 1005	F
HU 6040	206 - 2006	F
HUF 50	201 - 504	F
GRHS 30	150 - 1000	F
GTTKS	465 - 665	S
TKS	450 - 600	S
Legend:	V = Steel, electro galvanised; S = Steel, pre-galvanised; F = Steel, hot dip galvanised	

2.2 Product description and manufacture

Cable tray systems

Cable tray systems support cables and electrical lines. They are typically made of perforated, slotted, and folded sheet metal. Depending on the design and area of application, they are available in various heights – from 35 to 110 millimeters – and can support distances of up to four meters. They are made of steel or stainless steel with pre-galvanised or hot dip galvanised surfaces. Typical applications include building services engineering, industry, tunnel construction and power plant construction.

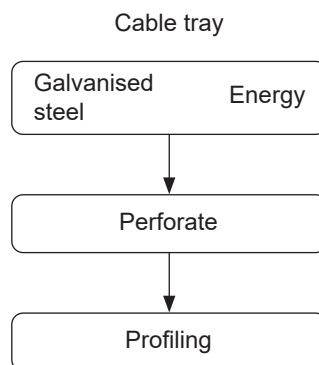


Figure 1 Manufacturing process for cable tray

2. SCOPE OF THE STUDY

Wire mesh systems

Wire mesh systems consist of welded wires and also serve as a support system for cables and lines. They are available in side heights from 30 to 105 mm and are designed for support distances of up to 4 metres. The systems are made of steel or stainless steel and are available in pre-galvanised or hot dip galvanised versions. Typical areas of application are building services engineering, industrial and building installations in indoor and outdoor areas.

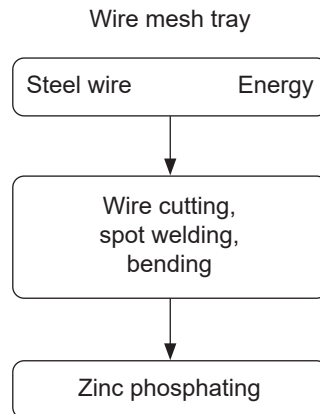


Figure 2 Manufacturing process for wire mesh tray

Cable ladder systems

Cable ladder systems are usually made of steel or stainless steel sheet and consist of two rails with rungs in between, which are either welded or riveted. The components are often perforated, slotted and chamfered. Depending on the type, side heights of 40 to 100 mm are available, suitable for support distances of up to 5 metres. The systems are available in pre- or hot dip galvanised versions. Typical areas of application are building services, industry, tunnels, power plant and plant construction.

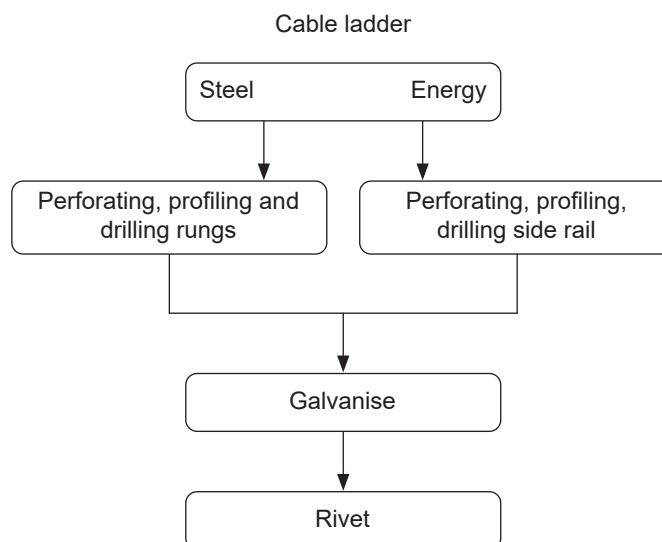


Figure 3 Manufacturing process for cable ladder

Wide span systems

Wide span systems are support systems for cables and lines, usually made of steel or stainless steel sheet and consisting of two rails with rungs or base plates. The components are often perforated, slotted and chamfered. They are available in side heights from 105 to 200 mm and are designed for large support distances of up to 12 meters. Here too, steel and stainless steel as well as pre- or hot dip galvanised surfaces are available, so that all applications and environments can be covered. Typical areas of application are industry, building services engineering, power plant and plant construction.

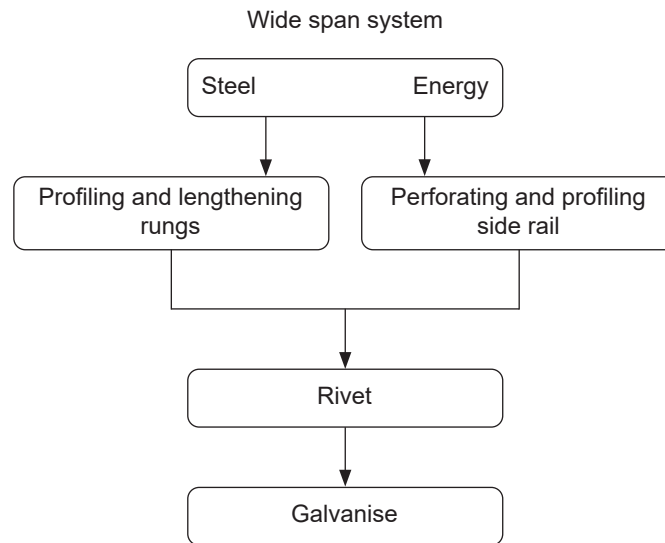


Figure 4 Manufacturing process for wide span tray

Overhead hanger and cantilever

As each system comprises a cantilever and an overhead hanger, the production processes for these components are described below.

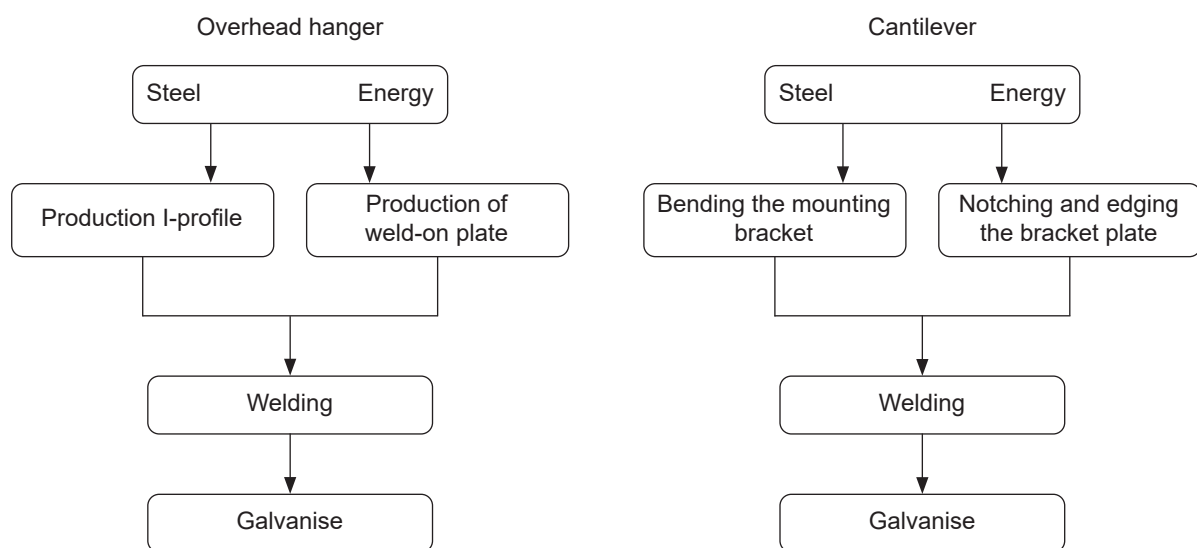


Figure 5 Manufacturing process for overhead hanger and cantilever

2. SCOPE OF THE STUDY

2.3 System boundaries

Type of life cycle assessment: From cradle to gate with modules C1 – C4 and module D. The following information modules are defined as system boundaries in this study:

- Product stage (A1 – A3):
 - A1, raw material supply
 - A2, transport
 - A3, manufacturing
- End of life stage (C1 – C4):
 - C1, deconstruction / demolition
 - C2, transport
 - C3, waste processing
 - C4, disposal
- Reuse, recovery or recycling potential (D)

A total of eight information modules are considered in order to accurately record the indicators and environmental impacts of the declared unit. Information modules A1 to A3 describe the material supply, transport to the production site, and the production processes of the product itself. The preliminary products are sourced from the European Union. Transport is by truck.

Information modules C1 to C4 address the processes of dismantling or demolition from the building, transport to waste disposal, and the treatment and disposal of the product. Moreover, the potential for reuse, recovery or recycling is documented in Information Module D.

2.4 Information on the electricity mix

The product is manufactured at the production site in St. Katharinen, Germany. For this site, 100% of the electrical energy required is sourced from the German electricity mix (residual). The electricity mix is accounted for on a country-specific basis and reported in the life cycle inventory.

2.5 Impact assessment

The impact assessment of environmental impacts is carried out in accordance with EN 15804 + A2. The characterisation factors are selected in accordance with PCR. Long-term emissions > 100 years are excluded. The impact assessment results in this study only make relative statements. Furthermore, an evaluation is carried out in accordance with TRACI 2.1.

2.6 Data collection

Data collection for the life cycle inventory is carried out in accordance with DIN EN ISO 14044. A data collection form was sent to Niedax GmbH & Co. KG. Information on all considered information modules per declared unit was recorded. This study used a consistent and uniform calculation method. All information provided by the manufacturer is documented.

2.7 Assumptions and limitations

If components or materials are used in the life cycle phases of the product that are not available in the databases, they are substituted with comparable components or materials in terms of manufacturing impacts (resource use and emissions) and processing costs. This procedure is applied when a reasonable margin of error can be assumed.

The cut-off criterion according to EN 15804 + A2 is applied. All energy and mass inputs have been considered.

3. Life cycle assessment

3.1 Information module A1 – Raw material supply

The data on the raw material supply of cable tray-, wire mesh tray-, cable ladder- and wide span system is based on manufacturer specifications. This information forms the basis for this information module. The following diagram shows the material distribution of the declared unit cable support systems.

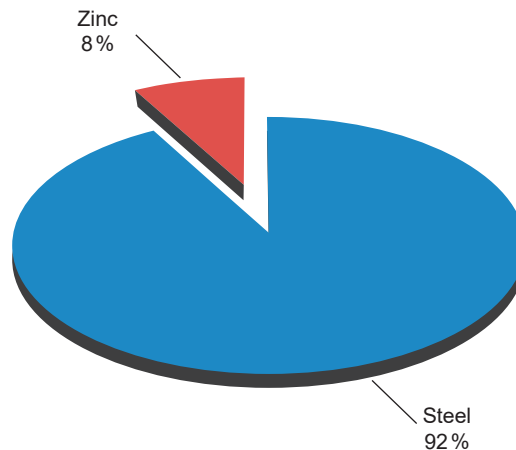


Figure 6 Material distribution per declared unit cable support system

Table 3 Material distribution of cable tray system

Material	Weight [kg/m]	Distribution [%]
Steel	36.26	92
Zinc	3.15	8
Total	39.41	100

Table 4 Material distribution of wire mesh tray system

Material	Weight [kg/m]	Distribution [%]
Steel	25.69	92
Zinc	2.23	8
Total	27.92	100

Table 5 Material distribution of cable ladder system

Material	Weight [kg/m]	Distribution [%]
Steel	28.99	92
Zinc	2.51	8
Total	31.51	100

Table 6 Material distribution of wide span system

Material	Weight [kg/m]	Distribution [%]
Steel	38.43	92
Zinc	3.34	8
Total	41.77	100

3. LIFE CYCLE ASSESSMENT

3.2 Information modul C1 – Deconstruction / demolition

The information module C1 calculates the demolition of cable support systems. Demolition is carried out manually from within the building.

3.3 Information modul C2 – Transport

The C2 information module describes the transport route of the waste from the declared unit from demolition of the building to the waste treatment plant. The transport route is assumed to be 50 km on average.

Since most of the transport routes are within Europe, a European mix was used as the basis for fuel supply. A standard truck, Euro 5, with 61% utilization and a standard distribution for highway (70%), country road (23%), and city (7%) is assumed.

3.4 Information modul C3 – Waste processing

In information module C3, the treatment of the waste from the declared unit is calculated from demolition of the building in the waste treatment plant. This data set contains 3% mass loss.

Table 7 Life cycle inventory data for waste treatment per declared unit cable tray system

Material	Weight [kg/m]
Input streams	
Waste from the declared unit	39.41
Output streams	
Waste for recycling	38.23

Table 8 Life cycle inventory data for waste treatment per declared unit wire mesh tray system

Material	Weight [kg/m]
Input streams	
Waste from the declared unit	27.92
Output streams	
Waste for thermal recycling	27.08

Table 9 Life cycle inventory data for waste treatment per declared unit cable ladder system

Material	Weight [kg/m]
Input streams	
Waste from the declared unit	31.51
Output streams	
Waste for recycling	30.56

Table 10 Life cycle inventory data for specific processes per declared unit wide span system

Material	Weight [kg/m]
Input streams	
Waste from the declared unit	41.77
Output streams	
Waste for recycling	40.51

3.5 Information modul C4 – Disposal

This calculation does not result in any disposal. Therefore, information module C4 is declared and reported as zero.

3.6 Information modul D – Reuse, recovery or recycling potential

Information module D only shows the substitution potential of primary steel. The recycled content of the product is not taken into account in order to avoid double counting of recycling benefits.

Net flow calculation: Product – 3% shredding – secondary content = net flow

Table 11 Recycling content system overview

Material	Weight [kg/m]
Input streams	
Cable tray system recycling	31.35
Wire mesh tray system recycling	22.21
Cable ladder system recycling	25.06
Wide span system recycling	33.29

3.7 Characteristic product properties biogenic carbon

No renewable raw materials are used in the product or packaging. Therefore, the biogenic carbon is reported as zero.

4. RESULTS OF THE LIFE CYCLE ASSESSMENT

4. Results of the life cycle assessment

Table 12 Specification of system boundaries

SPECIFICATION OF SYSTEM BOUNDARIES (X = INCLUDED IN LIFE CYCLE ASSESSMENT; MND = MODULE NOT DECLARED)																
Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Construction - Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse, recovery or recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x

Table 13 Results of the life cycle assessment environmental impacts cable tray system

RESULTS OF THE LIFE CYCLE ASSESSMENT ENVIRONMENTAL IMPACTS: Cable tray system [1 m]							
Core indicators	Unit	A1-3	C1	C2	C3	C4	D
GWP-total	[kg CO ² -eq.]	9.82E+01	0.00E+00	1.99E-01	1.07E-01	0.00E+00	-5.43E+01
GWP-fossil	[kg CO ² -eq.]	9.80E+01	0.00E+00	1.90E-01	1.08E-01	0.00E+00	-5.46E+01
GWP-biogenic	[kg CO ² -eq.]	1.96E-01	0.00E+00	8.06E-03	-1.75E-03	0.00E+00	3.22E-01
GWP-luluc	[kg CO ² -eq.]	4.59E-02	0.00E+00	1.96E-05	9.31E-04	0.00E+00	-7.27E-03
ODP	[kg CFC11-eq.]	3.69E-10	0.00E+00	2.93E-14	2.13E-13	0.00E+00	7.34E-11
AP	[mol H ⁺ -eq.]	2.26E-01	0.00E+00	9.37E-04	5.48E-04	0.00E+00	-1.34E-01
EP-freshwater	[kg P-eq.]	9.63E-05	0.00E+00	4.81E-08	2.71E-07	0.00E+00	-1.27E-05
EP-marine	[kg N-eq.]	5.64E-02	0.00E+00	4.56E-04	2.55E-04	0.00E+00	-2.15E-02
EP-terrestrial	[mol N-eq.]	6.09E-01	0.00E+00	5.02E-03	2.76E-03	0.00E+00	-1.92E-01
POCP	[kg NMVOC-eq.]	1.81E-01	0.00E+00	9.38E-04	6.79E-04	0.00E+00	-8.72E-02
ADPE	[kg Sb-eq.]	1.14E-02	0.00E+00	5.67E-09	1.10E-07	0.00E+00	-3.09E-04
ADPF	[MJ]	9.71E+02	0.00E+00	2.63E+00	2.00E+00	0.00E+00	-5.43E+02
WDP	[m ³ World eq. deprived]	5.54E+00	0.00E+00	4.99E-04	1.92E-02	0.00E+00	-3.69E+00
Resource usage							
PERE	[MJ]	1.07E+02	0.00E+00	1.89E-02	1.96E-01	0.00E+00	2.14E+01
PERM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.07E+02	0.00E+00	1.89E-02	1.96E-01	0.00E+00	2.14E+01
PENRE	[MJ]	9.71E+02	0.00E+00	2.63E+00	2.00E+00	0.00E+00	-5.43E+02
PENRM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	9.71E+02	0.00E+00	2.63E+00	2.00E+00	0.00E+00	-5.43E+02
SM	[kg]	6.88E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+01
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	1.27E-01	0.00E+00	2.06E-05	5.23E-04	0.00E+00	-5.53E+00
Waste categories							
HWD	[kg]	9.42E-08	0.00E+00	9.96E-11	2.75E-10	0.00E+00	-4.06E-06
NHWD	[kg]	1.38E+00	0.00E+00	2.34E-04	5.03E-04	0.00E+00	6.57E+00
RWD	[kg]	1.98E-02	0.00E+00	4.39E-06	2.53E-05	0.00E+00	5.95E-05
Output material flows							
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	1.54E+00	0.00E+00	0.00E+00	3.94E+01	0.00E+00	0.00E+00
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [electric]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [thermal]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Legend	GWP – Global warming potential, ODP – Ozone depletion potential, AP – Acidification potential, EP – Eutrophication potential, POCP – Photochemical ozone creation potential, ADPE – Abiotic depletion potential for non-fossil resources, ADPF – Abiotic depletion potential for fossil resources, WDP – Water (user) deprivation potential, 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 material, RSF – Use of renewable secondary fuels, NRSF – Use of non-renewable secondary fuels, FW – Use of net fresh water, HWD – Hazardous waste disposed, NHWD – Non-hazardous waste disposed, RWD – Radioactive waste disposed, CRU – Components for reuse, MFR – Materials for recycling, MER – Materials for energy recovery, EE – Exported energy per energy carrier						

4. RESULTS OF THE LIFE CYCLE ASSESSMENT

Table 14 Results of the life cycle assessment environmental impacts wire mesh tray system

RESULTS OF THE LIFE CYCLE ASSESSMENT ENVIRONMENTAL IMPACTS: Wire mesh traysystem [1 m]							
Core indicators	Unit	A1-3	C1	C2	C3	C4	D
GWP-total	[kg CO ² -eq.]	7.34E+01	0.00E+00	1.41E-01	7.60E-02	0.00E+00	-4.03E+01
GWP-fossil	[kg CO ² -eq.]	7.32E+01	0.00E+00	1.35E-01	7.65E-02	0.00E+00	-4.05E+01
GWP-biogenic	[kg CO ² -eq.]	1.39E-01	0.00E+00	5.71E-03	-1.24E-03	0.00E+00	2.39E-01
GWP-luluc	[kg CO ² -eq.]	3.33E-02	0.00E+00	1.39E-05	6.59E-04	0.00E+00	-5.39E-03
ODP	[kg CFC11-eq.]	2.62E-10	0.00E+00	2.08E-14	1.51E-13	0.00E+00	5.44E-11
AP	[mol H ⁺ -eq.]	1.64E-01	0.00E+00	6.64E-04	3.88E-04	0.00E+00	-9.91E-02
EP-freshwater	[kg P-eq.]	6.85E-05	0.00E+00	3.41E-08	1.92E-07	0.00E+00	-9.44E-06
EP-marine	[kg N-eq.]	4.15E-02	0.00E+00	3.23E-04	1.80E-04	0.00E+00	-1.59E-02
EP-terrestrial	[mol N-eq.]	4.48E-01	0.00E+00	3.56E-03	1.96E-03	0.00E+00	-1.43E-01
POCP	[kg NMVOC-eq.]	1.32E-01	0.00E+00	6.65E-04	4.81E-04	0.00E+00	-6.47E-02
ADPE	[kg Sb-eq.]	8.08E-03	0.00E+00	4.02E-09	7.78E-08	0.00E+00	-2.29E-04
ADPF	[MJ]	7.29E+02	0.00E+00	1.86E+00	1.41E+00	0.00E+00	-4.03E+02
WDP	[m ³ Welt-eq. entzogen]	3.94E+00	0.00E+00	3.53E-04	1.36E-02	0.00E+00	-2.73E+00
Resource usage							
PERE	[MJ]	7.62E+01	0.00E+00	1.34E-02	1.39E-01	0.00E+00	1.59E+01
PERM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	7.62E+01	0.00E+00	1.34E-02	1.39E-01	0.00E+00	1.59E+01
PENRE	[MJ]	7.29E+02	0.00E+00	1.86E+00	1.41E+00	0.00E+00	-4.03E+02
PENRM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	7.29E+02	0.00E+00	1.86E+00	1.41E+00	0.00E+00	-4.03E+02
SM	[kg]	4.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+01
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	9.51E-02	0.00E+00	1.46E-05	3.70E-04	0.00E+00	-4.10E+00
Waste categories							
HWD	[kg]	6.72E-08	0.00E+00	7.05E-11	1.95E-10	0.00E+00	-3.01E-06
NHWD	[kg]	9.88E-01	0.00E+00	1.65E-04	3.57E-04	0.00E+00	4.87E+00
RWD	[kg]	1.46E-02	0.00E+00	3.11E-06	1.79E-05	0.00E+00	4.41E-05
Output material flows							
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	1.10E+00	0.00E+00	0.00E+00	2.79E+01	0.00E+00	0.00E+00
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [electric]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [thermal]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Legend	GWP – Global warming potential, ODP – Ozone depletion potential, AP – Acidification potential, EP – Eutrophication potential, POCP – Photochemical ozone creation potential, ADPE – Abiotic depletion potential for non-fossil resources, ADPF – Abiotic depletion potential for fossil resources, WDP – Water (user) deprivation potential, 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 material, RSF – Use of renewable secondary fuels, NRSF – Use of non-renewable secondary fuels, FW – Use of net fresh water, HWD – Hazardous waste disposed, NHWD – Non-hazardous waste disposed, RWD – Radioactive waste disposed, CRU – Components for reuse, MFR – Materials for recycling, MER – Materials for energy recovery, EE – Exported energy per energy carrier						

Table 15 Results of the life cycle assessment environmental impacts cable ladder system

RESULTS OF THE LIFE CYCLE ASSESSMENT ENVIRONMENTAL IMPACTS: cable ladder system [1 m]							
Core indicators	Unit	A1-3	C1	C2	C3	C4	D
GWP-total	[kg CO ² -eq.]	7.97E+01	0.00E+00	3.17E-01	8.57E-02	0.00E+00	-4.02E+01
GWP-fossil	[kg CO ² -eq.]	7.94E+01	0.00E+00	3.05E-01	8.64E-02	0.00E+00	-4.05E+01
GWP-biogenic	[kg CO ² -eq.]	1.54E-01	0.00E+00	1.29E-02	-1.40E-03	0.00E+00	2.39E-01
GWP-luluc	[kg CO ² -eq.]	3.69E-02	0.00E+00	3.13E-05	7.44E-04	0.00E+00	-5.38E-03
ODP	[kg CFC11-eq.]	2.90E-10	0.00E+00	4.69E-14	1.70E-13	0.00E+00	5.43E-11
AP	[mol H ⁺ -eq.]	1.80E-01	0.00E+00	1.50E-03	4.38E-04	0.00E+00	-9.90E-02
EP-freshwater	[kg P-eq.]	7.41E-05	0.00E+00	7.70E-08	2.16E-07	0.00E+00	-9.43E-06
EP-marine	[kg N-eq.]	4.54E-02	0.00E+00	7.30E-04	2.04E-04	0.00E+00	-1.59E-02
EP-terrestrial	[mol N-eq.]	4.91E-01	0.00E+00	8.03E-03	2.21E-03	0.00E+00	-1.43E-01
POCP	[kg NMVOC-eq.]	1.46E-01	0.00E+00	1.50E-03	5.43E-04	0.00E+00	-6.46E-02
ADPE	[kg Sb-eq.]	8.22E-03	0.00E+00	9.07E-09	8.78E-08	0.00E+00	-2.29E-04
ADPF	[MJ]	7.85E+02	0.00E+00	4.20E+00	1.60E+00	0.00E+00	-4.02E+02
WDP	[m ³ World eq. deprived]	4.07E+00	0.00E+00	7.97E-04	1.54E-02	0.00E+00	-2.73E+00
Resource usage							
PERE	[MJ]	8.10E+01	0.00E+00	3.03E-02	1.57E-01	0.00E+00	1.59E+01
PERM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	8.10E+01	0.00E+00	3.03E-02	1.57E-01	0.00E+00	1.59E+01
PENRE	[MJ]	7.85E+02	0.00E+00	4.20E+00	1.60E+00	0.00E+00	-4.02E+02
PENRM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	7.85E+02	0.00E+00	4.20E+00	1.60E+00	0.00E+00	-4.02E+02
SM	[kg]	5.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E+01
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	9.73E-02	0.00E+00	3.29E-05	4.18E-04	0.00E+00	-4.09E+00
Waste categories							
HWD	[kg]	7.47E-08	0.00E+00	1.59E-10	2.20E-10	0.00E+00	-3.01E-06
NHWD	[kg]	1.09E+00	0.00E+00	3.73E-04	4.03E-04	0.00E+00	4.87E+00
RWD	[kg]	1.49E-02	0.00E+00	7.02E-06	2.02E-05	0.00E+00	4.41E-05
Output material flows							
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	1.22E+00	0.00E+00	0.00E+00	3.15E+01	0.00E+00	0.00E+00
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [electric]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [thermal]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Legend	GWP – Global warming potential, ODP – Ozone depletion potential, AP – Acidification potential, EP – Eutrophication potential, POCP – Photochemical ozone creation potential, ADPE – Abiotic depletion potential for non-fossil resources, ADPF – Abiotic depletion potential for fossil resources, WDP – Water (user) deprivation potential, 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 material, RSF – Use of renewable secondary fuels, NRSF – Use of non-renewable secondary fuels, FW – Use of net fresh water, HWD – Hazardous waste disposed, NHWD – Non-hazardous waste disposed, RWD – Radioactive waste disposed, CRU – Components for reuse, MFR – Materials for recycling, MER – Materials for energy recovery, EE – Exported energy per energy carrier						

4. RESULTS OF THE LIFE CYCLE ASSESSMENT

Table 16 Results of the life cycle assessment environmental impacts wide span system

RESULTS OF THE LIFE CYCLE ASSESSMENT ENVIRONMENTAL IMPACTS: wide span system [1 m]							
Core indicators	Unit	A1-3	C1	C2	C3	C4	D
GWP-total	[kg CO ² -eq.]	1.04E+02	0.00E+00	2.10E-01	1.14E-01	0.00E+00	-5.98E+01
GWP-fossil	[kg CO ² -eq.]	1.04E+02	0.00E+00	2.02E-01	1.15E-01	0.00E+00	-6.01E+01
GWP-biogenic	[kg CO ² -eq.]	2.06E-01	0.00E+00	8.54E-03	-1.86E-03	0.00E+00	3.54E-01
GWP-luluc	[kg CO ² -eq.]	4.84E-02	0.00E+00	2.07E-05	9.86E-04	0.00E+00	-8.00E-03
ODP	[kg CFC11-eq.]	3.88E-10	0.00E+00	3.11E-14	2.25E-13	0.00E+00	8.07E-11
AP	[mol H ⁺ -eq.]	2.38E-01	0.00E+00	9.94E-04	5.80E-04	0.00E+00	-1.47E-01
EP-freshwater	[kg P-eq.]	1.02E-04	0.00E+00	5.10E-08	2.87E-07	0.00E+00	-1.40E-05
EP-marine	[kg N-eq.]	5.95E-02	0.00E+00	4.84E-04	2.70E-04	0.00E+00	-2.36E-02
EP-terrestrial	[mol N-eq.]	6.44E-01	0.00E+00	5.32E-03	2.93E-03	0.00E+00	-2.12E-01
POCP	[kg NMVOC-eq.]	1.90E-01	0.00E+00	9.95E-04	7.19E-04	0.00E+00	-9.59E-02
ADPE	[kg Sb-eq.]	1.21E-02	0.00E+00	6.01E-09	1.16E-07	0.00E+00	-3.40E-04
ADPF	[MJ]	1.03E+03	0.00E+00	2.78E+00	2.12E+00	0.00E+00	-5.98E+02
WDP	[m ³ World eq. deprived]	5.87E+00	0.00E+00	5.28E-04	2.04E-02	0.00E+00	-4.06E+00
Resource usage							
PERE	[MJ]	1.13E+02	0.00E+00	2.01E-02	2.07E-01	0.00E+00	2.36E+01
PERM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.13E+02	0.00E+00	2.01E-02	2.07E-01	0.00E+00	2.36E+01
PENRE	[MJ]	1.03E+03	0.00E+00	2.78E+00	2.12E+00	0.00E+00	-5.98E+02
PENRM	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	1.03E+03	0.00E+00	2.78E+00	2.12E+00	0.00E+00	-5.98E+02
SM	[kg]	7.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+01
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	1.35E-01	0.00E+00	2.18E-05	5.54E-04	0.00E+00	-6.08E+00
Waste categories							
HWD	[kg]	9.92E-08	0.00E+00	1.06E-10	2.92E-10	0.00E+00	-4.47E-06
NHWD	[kg]	1.45E+00	0.00E+00	2.48E-04	5.34E-04	0.00E+00	7.23E+00
RWD	[kg]	2.10E-02	0.00E+00	4.65E-06	2.68E-05	0.00E+00	6.55E-05
Output material flows							
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	1.30E+00	0.00E+00	0.00E+00	4.18E+01	0.00E+00	0.00E+00
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [electric]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE [thermal]	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Legend	GWP – Global warming potential, ODP – Ozone depletion potential, AP – Acidification potential, EP – Eutrophication potential, POCP – Photochemical ozone creation potential, ADPE – Abiotic depletion potential for non-fossil resources, ADPF – Abiotic depletion potential for fossil resources, WDP – Water (user) deprivation potential, 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 material, RSF – Use of renewable secondary fuels, NRSF – Use of non-renewable secondary fuels, FW – Use of net fresh water, HWD – Hazardous waste disposed, NHWD – Non-hazardous waste disposed, RWD – Radioactive waste disposed, CRU – Components for reuse, MFR – Materials for recycling, MER – Materials for energy recovery, EE – Exported energy per energy carrier						

Table 17 TRACI .2.1 Evaluation of cable tray system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP, with biogenic CO ² [kg CO ² eq.]	8.89E+01	5.29E-01	8.29E+00	0.00E+00	1.96E-01	1.04E-01	0.00E+00	-5.37E+01
GWP, excluding biogenic CO ² [kg CO ² eq.]	8.88E+01	5.07E-01	8.29E+00	0.00E+00	1.88E-01	1.06E-01	0.00E+00	-5.40E+01
Eutrophication [kg N eq.]	9.13E-03	1.48E-04	8.26E-04	0.00E+00	5.43E-05	4.52E-05	0.00E+00	-6.43E-03
Human Health Particulate Air [kg PM _{2.5} eq.]	2.04E-02	5.09E-05	5.11E-04	0.00E+00	1.92E-05	4.58E-05	0.00E+00	-1.23E-02
Human toxicity, carcinogenic [CTUh]	1.14E-07	1.52E-10	1.24E-09	0.00E+00	5.96E-11	8.95E-11	0.00E+00	1.90E-08
Human toxicity, non-carcinogenic [CTUh]	4.43E-06	1.13E-08	1.07E-07	0.00E+00	4.44E-09	1.00E-08	0.00E+00	2.33E-06
Ecotoxicity [CTUe]	1.55E+01	3.45E-02	1.50E-01	0.00E+00	1.35E-02	3.61E-02	0.00E+00	2.58E-01
ODP [kg CFC 11 eq.]	3.16E-10	9.55E-15	2.55E-13	0.00E+00	3.75E-15	1.95E-14	0.00E+00	1.48E-12
ADPE [MJ surplus energy]	2.93E+01	9.58E-01	9.53E+00	0.00E+00	3.76E-01	2.71E-01	0.00E+00	-6.86E-02
Smog, air [kg O ₃ eq.]	3.27E+00	5.42E-02	1.90E-01	0.00E+00	2.00E-02	1.55E-02	0.00E+00	-1.16E+00
Acidification [kg SO ₂ eq.]	1.85E-01	2.37E-03	7.69E-03	0.00E+00	8.74E-04	5.01E-04	0.00E+00	-1.08E-01

Table 18 TRACI .2.1 Evaluation of wire mesh tray system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP, with biogenic CO ² [kg CO ² eq.]	6.30E+01	3.78E-01	9.59E+00	0.00E+00	1.39E-01	7.38E-02	0.00E+00	-3.98E+01
GWP, excluding biogenic CO ² [kg CO ² eq.]	6.29E+01	3.63E-01	9.59E+00	0.00E+00	1.33E-01	7.52E-02	0.00E+00	-4.01E+01
Eutrophication [kg N eq.]	6.47E-03	1.05E-04	1.02E-03	0.00E+00	3.85E-05	3.20E-05	0.00E+00	-4.76E-03
Human Health Particulate Air [kg PM _{2.5} eq.]	1.45E-02	3.70E-05	6.57E-04	0.00E+00	1.36E-05	3.25E-05	0.00E+00	-9.14E-03
Human toxicity, carcinogenic [CTUh]	8.05E-08	1.15E-10	1.39E-09	0.00E+00	4.22E-11	6.34E-11	0.00E+00	1.41E-08
Human toxicity, non-carcinogenic [CTUh]	3.14E-06	8.57E-09	1.29E-07	0.00E+00	3.15E-09	7.11E-09	0.00E+00	1.73E-06
Ecotoxicity [CTUe]	1.10E+01	2.62E-02	1.71E-01	0.00E+00	9.60E-03	2.56E-02	0.00E+00	1.91E-01
ODP [kg CFC 11 eq.]	2.24E-10	7.24E-15	3.39E-13	0.00E+00	2.66E-15	1.38E-14	0.00E+00	1.09E-12
ADPE [MJ surplus energy]	2.07E+01	7.26E-01	9.24E+00	0.00E+00	2.66E-01	1.92E-01	0.00E+00	-5.09E-02
Smog, air [kg O ₃ eq.]	2.32E+00	3.86E-02	2.30E-01	0.00E+00	1.41E-02	1.09E-02	0.00E+00	-8.60E-01
Acidification [kg SO ₂ eq.]	1.31E-01	1.69E-03	9.49E-03	0.00E+00	6.19E-04	3.55E-04	0.00E+00	-7.97E-02

4. RESULTS OF THE LIFE CYCLE ASSESSMENT

Table 19 TRACI .2.1 Evaluation of cable ladder system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP, with biogenic CO ₂ [kg CO ₂ eq.]	7.05E+01	4.50E-01	8.20E+00	0.00E+00	3.13E-01	8.33E-02	0.00E+00	-3.98E+01
GWP, excluding biogenic CO ₂ [kg CO ₂ eq.]	7.05E+01	4.32E-01	8.20E+00	0.00E+00	3.00E-01	8.49E-02	0.00E+00	-4.00E+01
Eutrophication [kg N eq.]	7.17E-03	1.25E-04	8.46E-04	0.00E+00	8.68E-05	3.61E-05	0.00E+00	-4.76E-03
Human Health Particulate Air [kg PM _{2.5} eq.]	1.62E-02	4.41E-05	5.33E-04	0.00E+00	3.07E-05	3.66E-05	0.00E+00	-9.13E-03
Human toxicity, carcinogenic [CTUh]	9.00E-08	1.37E-10	1.21E-09	0.00E+00	9.53E-11	7.16E-11	0.00E+00	1.40E-08
Human toxicity, non-carcinogenic [CTUh]	3.42E-06	1.02E-08	1.08E-07	0.00E+00	7.10E-09	8.03E-09	0.00E+00	1.73E-06
Ecotoxicity [CTUe]	1.14E+01	3.12E-02	1.47E-01	0.00E+00	2.17E-02	2.89E-02	0.00E+00	1.91E-01
ODP [kg CFC 11 eq.]	2.53E-10	8.63E-15	2.71E-13	0.00E+00	6.00E-15	1.56E-14	0.00E+00	1.09E-12
ADPE [MJ surplus energy]	2.28E+01	8.65E-01	8.67E+00	0.00E+00	6.02E-01	2.16E-01	0.00E+00	-5.08E-02
Smog, air [kg O ₃ eq.]	2.59E+00	4.60E-02	1.93E-01	0.00E+00	3.19E-02	1.24E-02	0.00E+00	-8.59E-01
Acidification [kg SO ₂ eq.]	1.46E-01	2.01E-03	7.86E-03	0.00E+00	1.40E-03	4.01E-04	0.00E+00	-7.96E-02

Table 20 TRACI .2.1 Evaluation of wide span system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP, with biogenic CO ₂ [kg CO ₂ eq.]	9.35E+01	5.41E-01	9.42E+00	0.00E+00	2.07E-01	1.10E-01	0.00E+00	-5.91E+01
GWP, excluding biogenic CO ₂ [kg CO ₂ eq.]	9.34E+01	5.19E-01	9.42E+00	0.00E+00	1.99E-01	1.13E-01	0.00E+00	-5.94E+01
Eutrophication [kg N eq.]	9.62E-03	1.50E-04	9.51E-04	0.00E+00	5.76E-05	4.79E-05	0.00E+00	-7.07E-03
Human Health Particulate Air [kg PM _{2.5} eq.]	2.15E-02	5.30E-05	5.92E-04	0.00E+00	2.03E-05	4.86E-05	0.00E+00	-1.36E-02
Human toxicity, carcinogenic [CTUh]	1.20E-07	1.65E-10	1.41E-09	0.00E+00	6.31E-11	9.48E-11	0.00E+00	2.09E-08
Human toxicity, non-carcinogenic [CTUh]	4.68E-06	1.23E-08	1.22E-07	0.00E+00	4.71E-09	1.06E-08	0.00E+00	2.57E-06
Ecotoxicity [CTUe]	1.65E+01	3.75E-02	1.70E-01	0.00E+00	1.44E-02	3.82E-02	0.00E+00	2.83E-01
ODP [kg CFC 11 eq.]	3.32E-10	1.04E-14	2.98E-13	0.00E+00	3.98E-15	2.06E-14	0.00E+00	1.62E-12
ADPE [MJ surplus energy]	3.09E+01	1.04E+00	1.05E+01	0.00E+00	3.99E-01	2.87E-01	0.00E+00	-7.55E-02
Smog, air [kg O ₃ eq.]	3.44E+00	5.52E-02	2.18E-01	0.00E+00	2.12E-02	1.64E-02	0.00E+00	-1.28E+00
Acidification [kg SO ₂ eq.]	1.95E-01	2.42E-03	8.85E-03	0.00E+00	9.26E-04	5.31E-04	0.00E+00	-1.18E-01

5. Interpretation

5.1 Dominance analysis

The following tables and diagrams show the main causes of environmental impacts and indicators in relation to the declared unit.

Table 21 Dominance analysis Information modules per declared unit cable tray system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP-total [kg CO ² -eq.]	8.93E+01	5.36E-01	8.38E+00	0.00E+00	1.99E-01	1.07E-01	0.00E+00	-5.43E+01
GWP-biogenic [kg CO ² -eq.]	1.64E-01	2.20E-02	9.99E-03	0.00E+00	8.06E-03	-1.75E-03	0.00E+00	3.22E-01
ODP [kg CFC11-eq.]	3.68E-10	7.47E-14	5.93E-13	0.00E+00	2.93E-14	2.13E-13	0.00E+00	7.34E-11
AP [mol H ⁺ -eq.]	2.15E-01	2.54E-03	8.53E-03	0.00E+00	9.37E-04	5.48E-04	0.00E+00	-1.34E-01
EP-freshwater [kg P-eq.]	9.26E-05	1.23E-07	3.53E-06	0.00E+00	4.81E-08	2.71E-07	0.00E+00	-1.27E-05
POCP [kg Ethen eq.]	1.70E-01	2.54E-03	8.56E-03	0.00E+00	9.38E-04	6.79E-04	0.00E+00	-8.72E-02
ADPE [kg Sb eq.]	1.14E-02	1.45E-08	1.08E-07	0.00E+00	5.67E-09	1.10E-07	0.00E+00	-3.09E-04
ADPF [MJ]	8.62E+02	6.69E+00	1.02E+02	0.00E+00	2.63E+00	2.00E+00	0.00E+00	-5.43E+02
PERT [MJ]	1.07E+02	4.82E-02	3.81E-01	0.00E+00	1.89E-02	1.96E-01	0.00E+00	2.14E+01
PENRT [MJ]	8.62E+02	6.69E+00	1.02E+02	0.00E+00	2.63E+00	2.00E+00	0.00E+00	-5.43E+02

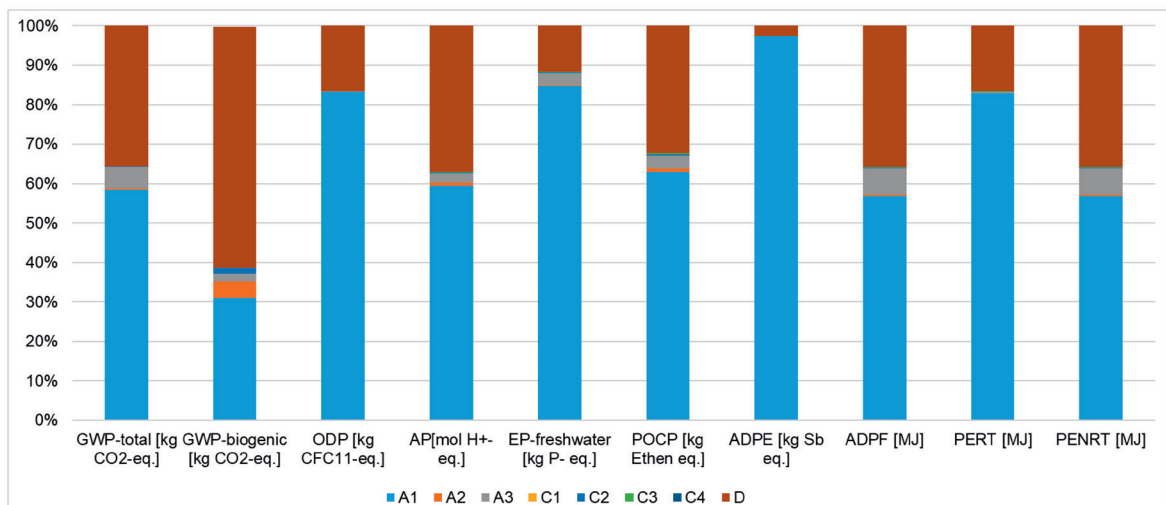


Figure 7 Dominance analysis Information modules per declared unit cable tray system

5. INTERPRETATION

Table 22 Dominance analysis Information modules per declared unit wire mesh tray system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP-total [kg CO ² -eq.]	6.33E+01	3.83E-01	9.70E+00	0.00E+00	1.41E-01	7.60E-02	0.00E+00	-4.03E+01
GWP-biogenic [kg CO ² -eq.]	1.16E-01	1.56E-02	7.78E-03	0.00E+00	5.71E-03	-1.24E-03	0.00E+00	2.39E-01
ODP [kg CFC11-eq.]	2.61E-10	5.66E-14	7.28E-13	0.00E+00	2.08E-14	1.51E-13	0.00E+00	5.44E-11
AP [mol H ⁺ -eq.]	1.52E-01	1.81E-03	1.05E-02	0.00E+00	6.64E-04	3.88E-04	0.00E+00	-9.91E-02
EP-freshwater [kg P-eq.]	6.56E-05	9.29E-08	2.83E-06	0.00E+00	3.41E-08	1.92E-07	0.00E+00	-9.44E-06
POCP [kg Ethen eq.]	1.20E-01	1.81E-03	1.03E-02	0.00E+00	6.65E-04	4.81E-04	0.00E+00	-6.47E-02
ADPE [kg Sb eq.]	8.08E-03	1.10E-08	1.06E-07	0.00E+00	4.02E-09	7.78E-08	0.00E+00	-2.29E-04
ADPF [MJ]	6.11E+02	5.07E+00	1.13E+02	0.00E+00	1.86E+00	1.41E+00	0.00E+00	-4.03E+02
PERT [MJ]	7.57E+01	3.66E-02	4.54E-01	0.00E+00	1.34E-02	1.39E-01	0.00E+00	1.59E+01
PENRT [MJ]	6.11E+02	5.07E+00	1.13E+02	0.00E+00	1.86E+00	1.41E+00	0.00E+00	-4.03E+02

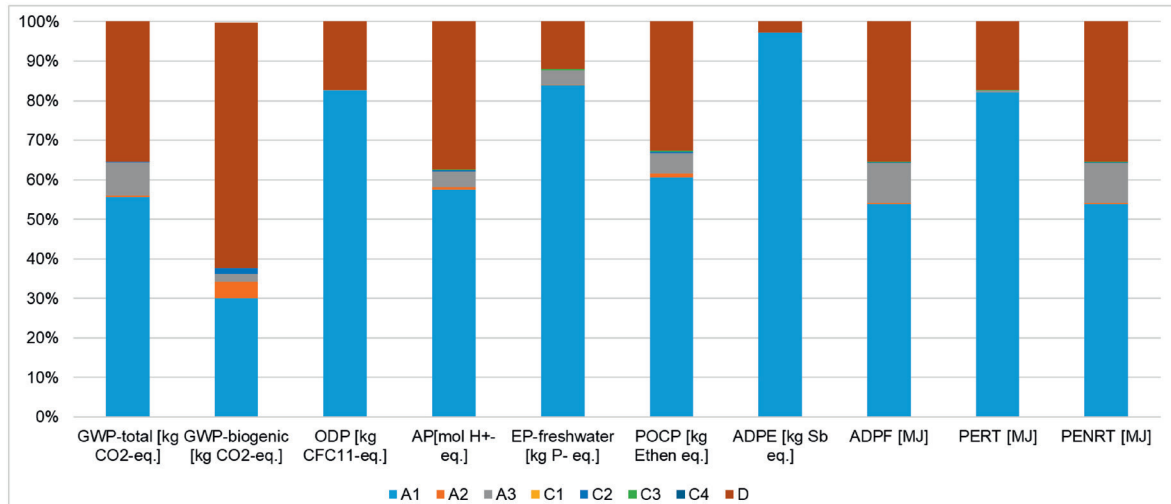


Figure 8 Dominance analysis Information modules per declared unit wire mesh tray system

Table 23 Dominance analysis Information modules per declared unit cable ladder system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP-total [kg CO ² -eq.]	7.09E+01	4.57E-01	8.30E+00	0.00E+00	3.17E-01	8.57E-02	0.00E+00	-4.02E+01
GWP-biogenic [kg CO ² -eq.]	1.27E-01	1.85E-02	8.28E-03	0.00E+00	1.29E-02	-1.40E-03	0.00E+00	2.39E-01
ODP [kg CFC11-eq.]	2.89E-10	6.75E-14	6.05E-13	0.00E+00	4.69E-14	1.70E-13	0.00E+00	5.43E-11
AP [mol H ⁺ -eq.]	1.69E-01	2.16E-03	8.73E-03	0.00E+00	1.50E-03	4.38E-04	0.00E+00	-9.90E-02
EP-freshwater [kg P-eq.]	7.10E-05	1.11E-07	2.96E-06	0.00E+00	7.70E-08	2.16E-07	0.00E+00	-9.43E-06
POCP [kg Ethen eq.]	1.35E-01	2.16E-03	8.64E-03	0.00E+00	1.50E-03	5.43E-04	0.00E+00	-6.46E-02
ADPE [kg Sb eq.]	8.22E-03	1.31E-08	9.87E-08	0.00E+00	9.07E-09	8.78E-08	0.00E+00	-2.29E-04
ADPF [MJ]	6.80E+02	6.04E+00	9.92E+01	0.00E+00	4.20E+00	1.60E+00	0.00E+00	-4.02E+02
PERT [MJ]	8.06E+01	4.36E-02	3.83E-01	0.00E+00	3.03E-02	1.57E-01	0.00E+00	1.59E+01
PENRT [MJ]	6.80E+02	6.04E+00	9.92E+01	0.00E+00	4.20E+00	1.60E+00	0.00E+00	-4.02E+02

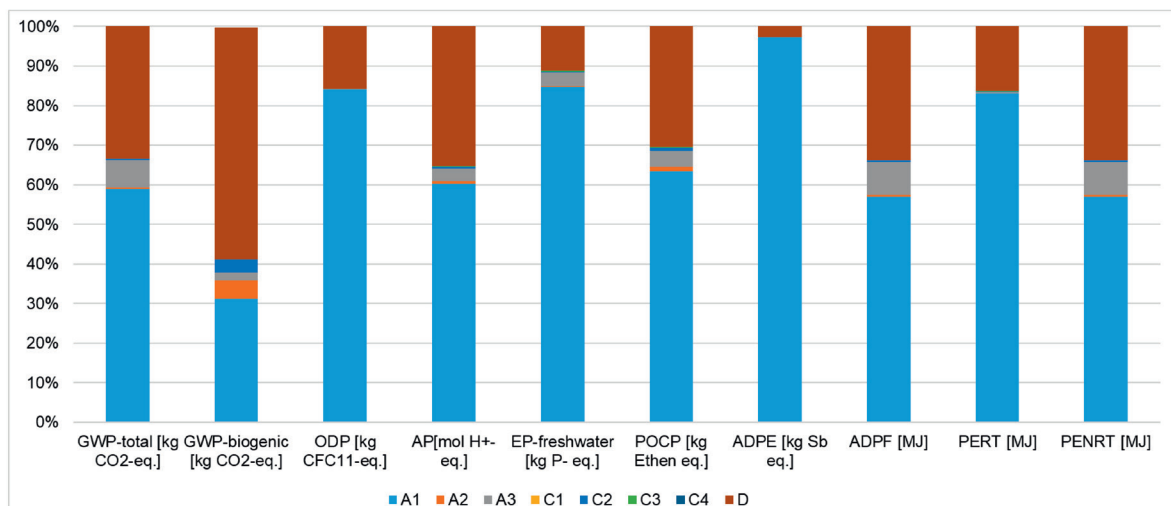


Figure 9 Dominance analysis Information modules per declared unit cable ladder system

5. INTERPRETATION

Table 24 Dominance analysis Information modules per declared unit wide span system

Indicator	A1	A2	A3	C1	C2	C3	C4	D
GWP-total [kg CO ² -eq.]	9.39E+01	5.49E-01	9.53E+00	0.00E+00	2.10E-01	1.14E-01	0.00E+00	-5.98E+01
GWP-biogenic [kg CO ² -eq.]	1.73E-01	2.23E-02	1.07E-02	0.00E+00	8.54E-03	-1.86E-03	0.00E+00	3.54E-01
ODP [kg CFC11-eq.]	3.87E-10	8.11E-14	6.81E-13	0.00E+00	3.11E-14	2.25E-13	0.00E+00	8.07E-11
AP [mol H ⁺ -eq.]	2.26E-01	2.59E-03	9.81E-03	0.00E+00	9.94E-04	5.80E-04	0.00E+00	-1.47E-01
EP-freshwater [kg P-eq.]	9.77E-05	1.33E-07	3.80E-06	0.00E+00	5.10E-08	2.87E-07	0.00E+00	-1.40E-05
POCP [kg Ethen eq.]	1.78E-01	2.60E-03	9.80E-03	0.00E+00	9.95E-04	7.19E-04	0.00E+00	-9.59E-02
ADPE [kg Sb eq.]	1.21E-02	1.57E-08	1.19E-07	0.00E+00	6.01E-09	1.16E-07	0.00E+00	-3.40E-04
ADPF [MJ]	9.07E+02	7.26E+00	1.16E+02	0.00E+00	2.78E+00	2.12E+00	0.00E+00	-5.98E+02
PERT [MJ]	1.13E+02	5.24E-02	4.36E-01	0.00E+00	2.01E-02	2.08E-01	0.00E+00	2.36E+01
PENRT [MJ]	9.07E+02	7.26E+00	1.16E+02	0.00E+00	2.78E+00	2.12E+00	0.00E+00	-5.98E+02

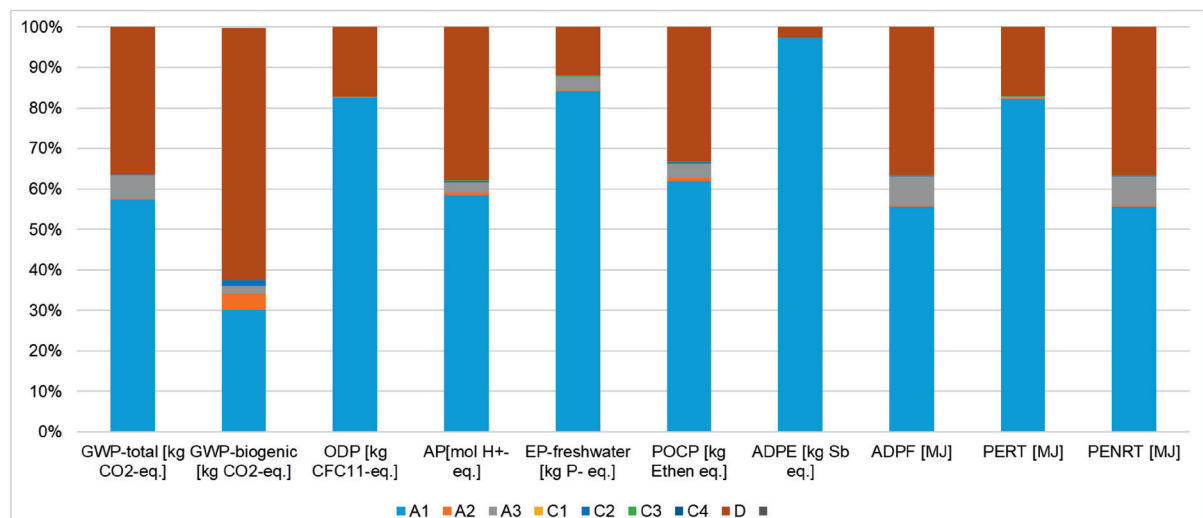


Figure 10 Dominance analysis Information modules per declared unit wide span system

5.2 Interpretation of results

The dominance analysis shows that the main causes of the environmental impacts and indicators in information module A1 are found in all products of the cable support system. This is particularly evident in the global warming potential (GWP), which is around 56 % to 58 % in module A1 in relation to material provision. Production (module A3) also contributes significantly to the GWP, accounting for around 4 % to 7 % of the total for all information modules.

Transport (modules A2 and C2) and shredding in module C3 play a minor role in all four products considered. The associated environmental impacts are consistently classified as low to marginal.

With regard to recycling, information module D shows a GWP credit potential of 34 % to 37 %, depending on the cable support system.

6. References

General principles:

- DIN EN ISO 14025
DIN EN /ISO 14025:2011-10/, Umweltkennzeichnungen und -deklarationen - Type III Umweltdeklarationen - Grundsätze und Verfahren
- DIN EN ISO 14044
DIN EN ISO 14044:2006-10, Umweltmanagement - Ökobilanz - Anforderungen und Anleitungen (ISO 14044:2006); Deutsche und Englische Fassung EN ISO 14044:2006
- EN 15804 + A2
EN 15804:2019-04+A2+AC:2021, Nachhaltigkeit von Bauwerken – Umweltproduktdeklarationen – Grundregeln für die Produktkategorie Bauprodukte
- EN/TR 15941
CEN/TR 15941:2010-03: Nachhaltigkeit von Bauwerken – Umweltproduktdeklarationen - Methoden für Auswahl und Verwendung von generischen Daten; Deutsche Fassung CEN/TR
- Sphera
LCA for Experts: Ganzheitliche Bilanzierung
Leinfelden-Echterdingen; Sphera Solution GmbH (Hrsg.)
Product Sustainability Data Search | Sphera (GaBi)
(10.07.2025)



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