Statement of Verification

BREG EN EPD No.: 000537 Issue 02

This is to verify that the

Environmental Product Declaration

provided by:

Mayflex UK Limited

is in accordance with the requirements of:

EN 15804:2012+A2:2019

and

BRE Global Scheme Document SD207

This declaration is for:

1 metre of CAT6 & CAT6A Patch Leads - U/UTP Unshielded LSOH

Company Address

Mayflex UK Limited
Unit 15,
Junction Six Industrial Park,
Electric Avenue
Birmingham
B6 7JJ

Signed for BRE Global Ltd	Laura Critien Operator	25 October 2023 Date of this Issue
25 October 2023 Date of First Issue		24 October 2028 Expiry Date

Environmental Product Declaration

EPD Number: **000537**

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE 2021 Product Category Rules (PN 514 Rev 3.0) for Type III environmental product declaration of construction products to EN 15804:2012+A2:2019.
Commissioner of LCA study	**LCA consultant/Tool**
Mayflex UK Limited Unit 15, Junction Six Industrial Park, Electric Avenue Birmingham B6 7JJ	LCA Tool: BRE LINA A2 LCA Consultant: Bala Subramanian
Declared/Functional Unit	**Applicability/Coverage**
1 metre of CAT6 & CAT6A Patch Leads - U/UTP Unshielded LSOH	Other (please specify). Product Specific
EPD Type	**Background database**
Cradle to Gate with options	ecoinvent

Demonstration of Verification
CEN standard EN 15804 serves as the core PCR [a]
Independent verification of the declaration and data according to EN ISO 14025:2010 ☐Internal ☒ External
(Where appropriate [b])Third party verifier: Pat Hermon
a: Product category rules b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)

Comparability
Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance

Information modules covered

Product			Construction		Use stage							End-of-life					Benefits and loads beyond the system boundary
					Related to the building fabric					Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal		Reuse, Recovery and/or Recycling potential
☑	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☑	☑	☑	☑		☑

Note: Ticks indicate the Information Modules declared.

Manufacturing site(s)

Mayflex UK Limited
Unit 15,
Junction Six Industrial Park,
Electric Avenue
Birmingham
B6 7JJ

Construction Product:

Product Description

Excel CAT6 & CAT6A Patch Leads - U/UTP Unshielded LSOH Blade Booted leads are manufactured and tested to ISO 11801, EN 50173 & TIA/EIA 568 requirements for patchlead assemblies and provide optimum performance levels for structured cabling installations.

The patchleads utilise stranded copper conductors for flexibility. Standard patchleads are offered in a variety of colours and lengths (including small diameter ‘mini’ patchleads), which follow the T568B wiring standard, terminated with a blade style slimline moulded strain relief boot and clip protector. The outer sheath is made from Low Smoke, Zero Halogen material.

Product name:	Item Code	Weight (kg/m)
Excel Cat6A Patch Lead U/UTP Unshielded LSOH Blade Booted	100-500 to 100-542	0.0480
Excel Cat6 Patch Lead U/UTP Unshielded LSOH Blade Booted	100-310 to 100-562	0.0349
Excel Cat6 Mini Patch Lead U/UTP Unshielded LSOH Blade Booted	100-504-10	0.022
Excel Cat6 Patch Lead U/UTP Unshielded LSOH Blade Booted	100-318 to 100-431	0.0397

Technical Information

Property	CAT6A	CAT6	CAT6 - Mini
Length	1m - 5m	0.3m - 20m	0.5m
Colours	Grey, Red, Green, Yellow, Blue	Grey, Red, Green, Yellow, Blue, Black, Violet, Pink, White, Orange	Grey
Cable Type	U/UTP	U/UTP	U/UTP
Category	6A	6	6
Connector 1	RJ45	RJ45	RJ45
Connector 2	RJ45	RJ45	RJ45
Strain Relief Boot	Moulded-On	Moulded-On	Moulded-On
Lockable	no	no	no
Strain Relief Boot Colour	Grey, Red, Green, Yellow, Blue	Grey, Red, Green, Yellow, Blue, Black, Violet, Pink, White, Orange	Grey
Flame Retardant Version	Yes	Yes	Yes
Halogen Free	Yes	Yes	Yes
Cable Construction	2x4	2x4	2x4
AWG Size	26	24	28
PIN Assignment	TIA 568B	TIA 568B	TIA 568B

Applicable standards

Standard	CAT6A	CAT6	CAT6 - Mini
ISO/IEC 11801-1:2017 Information technology - Generic cabling for customer premises: Part 1 General Requirements	Yes	Yes	Yes
EN 50173-1:2018 Information technology. Generic cabling systems - General requirements	Yes	Yes	Yes
ANSI/TIA 568-2. D Balanced Twisted-Pair Telecommunications Cabling and Components Standards	Yes	Yes	Yes
IEC 61156-5:2009+AMD1:2012 CSV Multicore and symmetrical pair/quad cables for digital communications - Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz - Horizontal floor wiring - Sectional specification	Yes	Yes	Yes
IEC 60332-1-2:2004 Tests on electric and optical fibre cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1 kW pre-mixed flame	Yes	Yes	Yes
IEC 61034-2:2005+A1:2013 Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements	Yes	Yes	Yes
RoHS Compliant to the Restriction of Hazardous Substances	Yes	Yes	Yes

Standard	CAT6A	CAT6	CAT6 - Mini
WFD Compliant to Waste Framework Directive	Yes	Yes	Yes
SCIP Compliant - Does Not Contain Substances of Concern in Products	Yes	Yes	Yes

Main Product Contents

Material/Chemical Input	%
Copper	35-40
Co-polymer	30-35
HDPE	8-10
Other	5-15

Note: Main product contents of all products assessed within this EPD

Manufacturing Process

The manufacturing process for these Patchleads involves a number of stages of extrusion (to produce the stranded cable) and then assembly and testing of the final patchlead.

The first process is to extrude pure copper through a series of precision dies, heated and pulled to achieve the required gauge of the wire. This is a highly accurate process requiring that the wire diameter is continually monitored as it exits the extrusion machine. Multiple wires are then twisted together to produce the stranded conductors used within the patchleads.

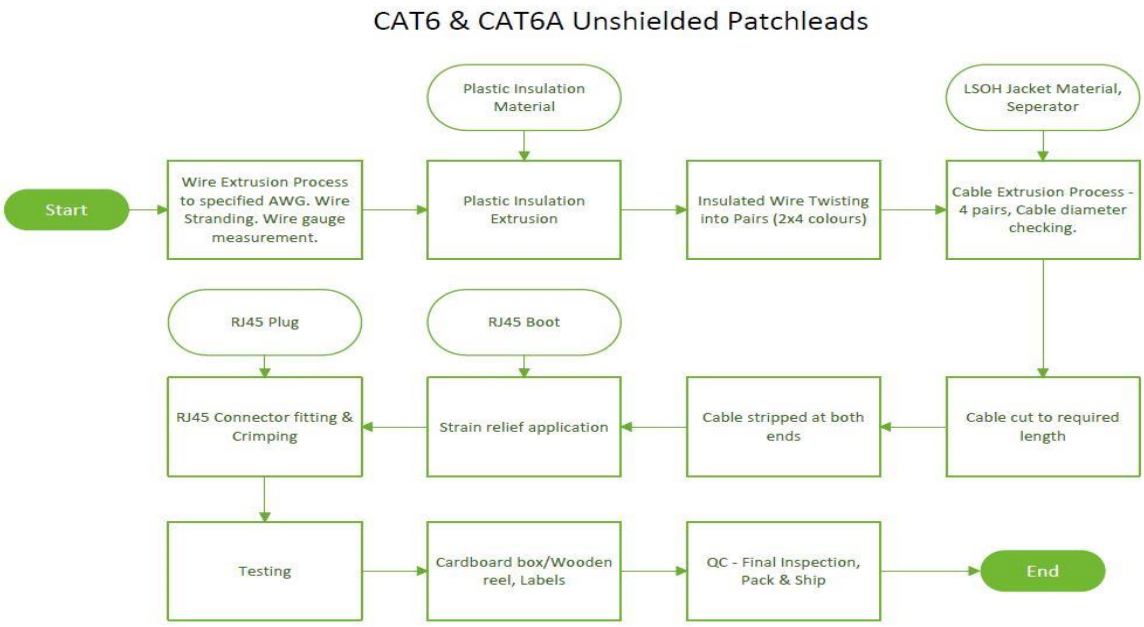
The next stage is to apply the wire insulation which requires another extrusion process, where the stranded wire is drawn through the extrusion machine whilst the molten plastic insulation is injected around the wire. The plastic insulation is colour coded, and this process is repeated 8 times to provide the 8 colours required for the final cable (blue, blue/white, orange, orange/white, green, green/white, brown, brown/white). Each pair of standard wires then go to the next process which twists them together. 2 reels of insulated wire are spun and pulled simultaneously to provide a precise and consistent twist. Each pair is given a slightly different twist length. No 2 pairs are the same. This is critical for the performance of the finished patchlead.

Once all 8 stranded wires are twisted into their respective pairs, all 4 pairs are again extruded into the final cable. This involves drawing the 4 pairs through the final extrusion process. The pairs are drawn through a die. On longer UTP patchleads, this process includes the introduction of a separator which sits between the pairs, the LSOH cable jacket material (molten plastic) and any other elements that are used in the final cable design. As the cable exits the machine, it is passed through a water bath for cooling and its diameter is continuously monitored.

The cable is tested and stored on cable reels awaiting the patchlead manufacturing process. To make the patchleads, the cable cut to the length required (typically 0.3m up to 20m). The cable ends are then stripped at both end ready for the strain relief application (boot). Once the boot has been fitted the cores are unwound and placed into their correct sequence for insertion into the RJ45 plug. For standard patchleads, the following sequence applies; Orange/White, Orange, Green/White, Blue, Blue/White, Green, Brown/White, Brown.

The cable ends are inserted into the RJ45 plug. The RJ45 plug is then introduced into an RJ45 crimper which uses a press fit (IDC) to insert the pins through the conductors. The patchleads are then tested to ensure they meet the required performance requirements and packaged as required.

Process flow diagram



Construction Installation

Installation of data cables is generally carried out by manual labour, with teams of operatives pulling and dressing cables. No powered equipment or consumable items are used in this process, so no waste is generated during the installation. But there are some wastes at the end of the box, and it was assumed as 3% of the cables waste; they will be collected and sent to recycling.

End of Life

Cables, that are the indispensable parts of electrical and electronic industry, consist of plastics, aluminium, and copper. At the end-of-life the cables are removed manually from the construction buildings. Waste cables are shredded into small chips first and the metallic parts are separated from the plastics physically by using gravity and electrostatic separation techniques (Celik et al., 2019).

Life Cycle Assessment Calculation Rules

Declared / Functional unit description.

1 metre of CAT6 & CAT6A Patch Leads - U/UTP Unshielded LSOH Blade Booted leads.

System boundary

This is a cradle-to-gate LCA, reporting all production life cycle stages of modules A1 to A3 and A4 and A5 (transportation and installation) and end of life stages C1-C4, and D in accordance with EN 15804:2012+A2:2019 and BRE 2021 Product Category Rules (PN 514 Rev 3.0).

Data sources, quality and allocation

The quantity used in the data collection for this EPD is the total quantity of 1 metre of CAT6 & CAT6A Patch Leads and mini patchlead - U/UTP Unshielded LSOH manufactured as a proportion of the total manufactured during the data collection period (01/01/21-31/12/21). Mayflex receives the data cables from their PRC manufacturing partners, therefore the transportation used to transfer the products from PRC to the UK is included in the LCA analysis. Other cables and products are manufactured in addition to the CAT6 & CAT6A Patch Leads and mini patchlead - U/UTP; therefore, the allocation of electricity and water consumption and discharge are required, and this has been done according to the provisions of the BRE PCR PN514 and EN 15804.

In this EPD, 1m of Cat.6 & 6A Patch Lead U/UTP Unshielded LSOH with the weight of 0.0480 kg/m, 0.0349 kg/m, 0.022 kg/m (mini-patch lead), and 0.0397 kg/m has been modelled and the LCA results are enclosed in this EPD. Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e., raw material production) from the ecoinvent 3.8 database. All ecoinvent datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804 A2.

ISO14044 guidance. **Quality Level**	**Geographical representativeness**	**Technical representativeness**	**Time representativeness**
Very Good	Data from area under study.	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e., identical technology).	n/a
Very Good	n/a	n/a	There is approximately 1-2 years between the Ecoinvent LCI reference year, and the time period for which the LCA was undertaken.

Specific European datasets have been selected from the ecoinvent LCI for this LCA. Manufacturer uses the national grid electricity for production, so therefore the national grid electricity dataset has been used for the LCA modelling (Ecoinvent 3.8). The GWP carbon footprint for using 1 kWh of Electricity, China is 1.054 in kgCO2e/kWh. The quality level of time representativeness is also Very Good as the background LCI datasets are based on ecoinvent v3.8 which was compiled in 2021. Therefore, there is less than 5 years between the ecoinvent LCI reference year and the time period for which the LCA was undertaken.

Cut-off criteria

All raw materials and energy inputs to the manufacturing process have been included. There were no ancillary materials used during the production and no direct emissions to air, water, or soil, which were not measured, and there were no non-production wastes recorded during the production period.

LCA Results - 1m of Cat6 Patch Lead U/UTP Unshielded with weight of 0.0480 kg/m

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	2.00E-01	1.99E-01	3.63E-04	2.94E-04	1.61E-08	1.16E-02	9.09E-04
	Transport	A2	2.08E-02	2.08E-02	9.67E-06	1.09E-05	4.53E-09	3.19E-04	1.08E-06
	Manufacturing	A3	2.06E-01	2.08E-01	-2.52E-03	5.57E-05	2.25E-09	1.05E-03	4.00E-05
	Total (Consumption grid)	A1-3	4.26E-01	4.28E-01	-2.15E-03	3.61E-04	2.29E-08	1.30E-02	9.50E-04
Construction process stage	Transport	A4	1.37E-03	1.37E-03	1.17E-06	5.39E-07	3.18E-10	5.57E-06	8.84E-08
	Construction	A5	1.68E-02	1.70E-02	-2.04E-04	1.20E-05	1.12E-09	3.97E-04	2.95E-05
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.29E-04	1.29E-04	1.17E-07	6.05E-08	2.89E-11	5.11E-07	9.66E-09
	Waste processing	C3	9.48E-02	9.46E-02	1.79E-04	2.24E-05	1.10E-08	1.42E-04	2.62E-05
	Disposal	C4	3.13E-03	3.12E-03	6.39E-06	6.94E-07	3.68E-10	4.53E-06	8.83E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.47E-01	-2.46E-01	-2.77E-04	-2.46E-04	-1.28E-08	-9.93E-03	-7.58E-04
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.29E-04	1.29E-04	1.17E-07	6.05E-08	2.89E-11	5.11E-07	9.66E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.16E-01	1.16E-01	1.43E-04	2.66E-05	1.38E-08	1.74E-04	3.28E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			EP-marine	EP-terrestrial	POCP	ADP-mineral &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	5.94E-04	8.12E-03	2.29E-03	2.75E-04	3.01E+00	2.06E-01	2.93E-08
	Transport	A2	8.13E-05	9.01E-04	2.41E-04	5.48E-08	2.95E-01	1.10E-03	1.34E-09
	Manufacturing	A3	2.33E-04	2.40E-03	6.57E-04	2.48E-07	2.00E+00	6.21E-02	1.48E-08
	Total (Consumption grid)	A1-3	9.08E-04	1.14E-02	3.19E-03	2.75E-04	5.30E+00	2.69E-01	4.54E-08
Construction process stage	Transport	A4	1.68E-06	1.83E-05	5.61E-06	4.77E-09	2.07E-02	9.34E-05	1.18E-10
	Construction	A5	2.89E-05	3.57E-04	9.97E-05	8.26E-06	1.82E-01	8.80E-03	1.42E-09
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.49E-07	1.63E-06	5.00E-07	5.86E-10	1.92E-03	9.78E-06	9.57E-12
	Waste processing	C3	3.32E-05	3.19E-04	8.85E-05	1.98E-07	4.52E-01	1.46E-02	1.45E-09
	Disposal	C4	1.01E-06	9.94E-06	2.71E-06	6.19E-09	1.43E-02	4.72E-04	4.31E-11
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.31E-04	-7.14E-03	-2.10E-03	-2.29E-04	-3.96E+00	-2.15E-01	-2.77E-08
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.49E-07	1.63E-06	5.00E-07	5.86E-10	1.92E-03	9.78E-06	9.57E-12
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	3.80E-05	3.74E-04	1.02E-04	2.32E-07	5.48E-01	1.70E-02	1.64E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts							
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.92E-02	9.26E+01	2.13E-09	1.53E-07	3.72E+00
	Transport	A2	1.45E-03	2.12E-01	9.75E-12	1.97E-10	1.44E-01
	Manufacturing	A3	4.74E-03	5.11E+00	4.94E-11	2.05E-09	5.69E-01
	Total (Consumption grid)	A1-3	2.54E-02	9.79E+01	2.19E-09	1.55E-07	4.44E+00
Construction process stage	Transport	A4	1.07E-04	1.62E-02	5.24E-13	1.70E-11	1.43E-02
	Construction	A5	9.04E-04	3.00E+00	6.86E-11	4.68E-09	1.44E-01
97.2% - Recycling 2.8% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.02E-05	1.57E-03	5.73E-14	1.58E-12	1.13E-03
	Waste processing	C3	2.97E-03	1.81E+00	6.11E-11	6.95E-10	1.16E-01
	Disposal	C4	9.54E-05	6.08E-02	1.95E-12	2.26E-11	3.09E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.54E-02	-7.68E+01	-1.75E-09	-1.27E-07	-3.12E+00
100% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.02E-05	1.57E-03	5.73E-14	1.58E-12	1.13E-03
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	3.57E-03	2.26E+00	7.26E-11	8.44E-10	1.17E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

LCA Results (continued)

Parameters describing resource use, primary energy								
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	1.76E+00	0.00E+00	1.76E+00	2.52E+00	7.03E-01	3.22E+00
	Transport	A2	3.37E-03	0.00E+00	3.37E-03	2.89E-01	0.00E+00	2.89E-01
	Manufacturing	A3	7.47E-01	5.76E-02	8.05E-01	7.76E+00	5.61E-04	7.76E+00
	Total (Consumption grid)	A1-3	2.51E+00	5.76E-02	2.57E+00	1.06E+01	7.04E-01	1.13E+01
Construction process stage	Transport	A4	2.92E-04	0.00E+00	2.92E-04	2.04E-02	0.00E+00	2.04E-02
	Construction	A5	1.19E-02	6.52E-02	7.71E-02	1.94E-01	1.44E-01	3.38E-01
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	-3.82E-01	3.82E-01	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.45E+00	0.00E+00	-1.45E+00	-1.67E+00	-1.45E-01	-1.81E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	2.29E-02	0.00E+00	2.29E-02	-2.76E-01	8.16E-01	5.40E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	5.52E-05	0.00E+00	0.00E+00	5.03E-03
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	2.72E-05
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	1.62E-03
	Total (Consumption grid)	A1-3	5.52E-05	0.00E+00	0.00E+00	6.68E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	2.31E-06
	Construction	A5	1.66E-06	0.00E+00	0.00E+00	2.18E-04
97.2% - Recycling 2.8% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.43E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	3.51E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.14E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.07E-07	0.00E+00	0.00E+00	-5.20E-03
100% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.43E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	4.09E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

LCA Results (continued)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	6.88E-02	2.71E+00	1.44E-05
	Transport	A2	3.50E-04	4.85E-03	2.01E-06
	Manufacturing	A3	1.13E-01	7.33E-01	4.63E-06
	Total (Consumption grid)	A1-3	1.83E-01	3.44E+00	2.10E-05
Construction process stage	Transport	A4	2.29E-05	4.06E-04	1.40E-07
	Construction	A5	5.48E-03	1.03E-01	6.32E-07
97.2% - Recycling 2.8% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.89E-02	-2.19E+00	-1.00E-05
100% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	6.82E-02	3.33E-02	3.22E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00

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

LCA Results (continued)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	2.01E-06	2.17E-08	8.12E-04	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03
	Total (Consumption grid)	A1-3	0.00E+00	2.01E-06	2.17E-08	8.12E-04	0.00E+00	2.03E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	6.02E-08	6.51E-10	2.43E-05	0.00E+00	6.10E-05
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	-1.09E-07	-1.67E-11	-2.73E-04	0.00E+00	0.00E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results - 1m of Cat6 Patch Lead U/UTP Unshielded with weight of 0.0397 kg/m

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.70E-01	1.69E-01	3.25E-04	2.18E-04	1.17E-08	8.68E-03	6.72E-04
	Transport	A2	1.08E-02	1.08E-02	1.15E-06	7.01E-06	2.22E-09	2.79E-04	4.32E-07
	Manufacturing	A3	2.83E-02	3.35E-02	-5.45E-03	1.08E-04	2.03E-09	1.66E-04	1.23E-05
	Total (Consumption grid)	A1-3	2.09E-01	2.14E-01	-5.12E-03	3.34E-04	1.59E-08	9.12E-03	6.85E-04
Construction process stage	Transport	A4	1.14E-03	1.13E-03	9.67E-07	4.46E-07	2.63E-10	4.61E-06	7.31E-08
	Construction	A5	8.53E-03	8.89E-03	-3.58E-04	1.04E-05	7.60E-10	2.76E-04	2.13E-05
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.07E-04	1.06E-04	9.65E-08	5.01E-08	2.39E-11	4.23E-07	7.99E-09
	Waste processing	C3	7.90E-02	7.88E-02	1.51E-04	1.85E-05	9.17E-09	1.18E-04	2.19E-05
	Disposal	C4	2.65E-03	2.64E-03	5.40E-06	5.87E-07	3.11E-10	3.84E-06	7.47E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.13E-01	-2.12E-01	-5.98E-05	-2.16E-04	-8.25E-09	-8.74E-03	-6.67E-04
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.07E-04	1.06E-04	9.65E-08	5.01E-08	2.39E-11	4.23E-07	7.99E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	9.63E-02	9.62E-02	1.18E-04	2.20E-05	1.14E-08	1.44E-04	2.72E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			EP-marine	EP-terrestrial	POCP	ADP-mineral &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	4.51E-04	6.14E-03	1.75E-03	2.03E-04	2.61E+00	1.59E-01	2.34E-08
	Transport	A2	6.91E-05	7.67E-04	2.00E-04	2.01E-08	1.44E-01	4.20E-04	4.74E-10
	Manufacturing	A3	6.76E-05	4.21E-04	1.04E-04	9.92E-08	3.57E-01	2.32E-02	2.52E-09
	Total (Consumption grid)	A1-3	5.87E-04	7.33E-03	2.05E-03	2.03E-04	3.11E+00	1.83E-01	2.64E-08
Construction process stage	Transport	A4	1.39E-06	1.52E-05	4.64E-06	3.95E-09	1.72E-02	7.72E-05	9.79E-11
	Construction	A5	1.76E-05	2.21E-04	6.11E-05	6.09E-06	1.02E-01	5.89E-03	7.55E-10
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.23E-07	1.34E-06	4.13E-07	4.85E-10	1.59E-03	8.09E-06	7.92E-12
	Waste processing	C3	2.74E-05	2.64E-04	7.32E-05	1.64E-07	3.75E-01	1.21E-02	1.20E-09
	Disposal	C4	8.56E-07	8.41E-06	2.29E-06	5.24E-09	1.21E-02	3.99E-04	3.65E-11
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.65E-04	-6.27E-03	-1.84E-03	-2.02E-04	-3.31E+00	-1.83E-01	-2.49E-08
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.23E-07	1.34E-06	4.13E-07	4.85E-10	1.59E-03	8.09E-06	7.92E-12
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	3.14E-05	3.09E-04	8.46E-05	1.92E-07	4.53E-01	1.41E-02	1.36E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts							
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.46E-02	6.87E+01	1.57E-09	1.13E-07	2.75E+00
	Transport	A2	6.72E-04	9.44E-02	5.93E-12	7.29E-11	4.03E-02
	Manufacturing	A3	2.75E-03	1.25E+00	2.01E-11	5.21E-10	7.98E-01
	Total (Consumption grid)	A1-3	1.80E-02	7.00E+01	1.60E-09	1.14E-07	3.59E+00
Construction process stage	Transport	A4	8.82E-05	1.34E-02	4.34E-13	1.40E-11	1.18E-02
	Construction	A5	6.02E-04	2.13E+00	4.93E-11	3.43E-09	1.09E-01
97.2% - Recycling 2.8% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	8.43E-06	1.30E-03	4.74E-14	1.31E-12	9.38E-04
	Waste processing	C3	2.47E-03	1.51E+00	5.07E-11	5.78E-10	9.47E-02
	Disposal	C4	8.07E-05	5.14E-02	1.65E-12	1.91E-11	2.62E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.29E-02	-6.79E+01	-1.54E-09	-1.12E-07	-2.75E+00
100% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	8.43E-06	1.30E-03	4.74E-14	1.31E-12	9.38E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	2.96E-03	1.87E+00	6.00E-11	6.98E-10	9.66E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

LCA Results (continued)

Parameters describing resource use, primary energy								
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	1.30E+00	0.00E+00	1.30E+00	2.09E+00	6.88E-01	2.78E+00
	Transport	A2	1.25E-03	0.00E+00	1.25E-03	1.41E-01	0.00E+00	1.41E-01
	Manufacturing	A3	6.05E-02	2.02E-01	2.62E-01	8.64E-01	2.32E-03	8.67E-01
	Total (Consumption grid)	A1-3	1.37E+00	2.02E-01	1.57E+00	3.10E+00	6.90E-01	3.79E+00
Construction process stage	Transport	A4	2.42E-04	0.00E+00	2.42E-04	1.68E-02	0.00E+00	1.68E-02
	Construction	A5	-9.87E-02	1.46E-01	4.70E-02	9.29E-02	2.07E-02	1.14E-01
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	-2.85E-01	2.85E-01	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.27E+00	0.00E+00	-1.27E+00	-1.48E+00	-1.18E-01	-1.60E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.90E-02	0.00E+00	1.90E-02	-2.28E-01	6.75E-01	4.47E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	3.93E-05	0.00E+00	0.00E+00	3.89E-03
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.04E-05
	Manufacturing	A3	1.67E-04	0.00E+00	0.00E+00	5.65E-04
	Total (Consumption grid)	A1-3	2.07E-04	0.00E+00	0.00E+00	4.47E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	1.91E-06
	Construction	A5	6.20E-06	0.00E+00	0.00E+00	1.44E-04
97.2% - Recycling 2.8% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.01E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	2.92E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	9.62E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.72E-07	0.00E+00	0.00E+00	-4.43E-03
100% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.01E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	3.38E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

LCA Results (continued)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	5.10E-02	2.00E+00	1.06E-05
	Transport	A2	1.83E-04	1.89E-03	9.91E-07
	Manufacturing	A3	1.07E-02	1.02E-01	1.57E-06
	Total (Consumption grid)	A1-3	6.19E-02	2.11E+00	1.32E-05
Construction process stage	Transport	A4	1.89E-05	3.36E-04	1.16E-07
	Construction	A5	1.86E-03	6.32E-02	3.97E-07
97.2% - Recycling 2.8% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.41E-02	-1.93E+00	-8.64E-06
100% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	5.64E-02	2.75E-02	2.66E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00

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

LCA Results (continued)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	1.53E-06	1.54E-08	8.48E-04	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	8.61E-04	8.06E-09	6.55E-04	0.00E+00	5.20E-03
	Total (Consumption grid)	A1-3	0.00E+00	8.62E-04	2.35E-08	1.50E-03	0.00E+00	5.20E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	2.59E-05	7.05E-10	4.51E-05	0.00E+00	1.56E-04
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	3.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	-1.75E-07	-2.67E-11	-4.38E-04	0.00E+00	0.00E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results - 1m of Cat6 Patch Lead U/UTP Unshielded with weight of 0.0349 kg/m

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.62E-01	1.61E-01	2.65E-04	2.16E-04	1.15E-08	8.69E-03	6.74E-04
	Transport	A2	9.24E-03	9.23E-03	9.83E-07	6.01E-06	1.90E-09	2.39E-04	3.70E-07
	Manufacturing	A3	7.97E-03	9.44E-03	-1.53E-03	3.54E-05	1.04E-09	3.70E-05	4.92E-06
	Total (Consumption grid)	A1-3	1.79E-01	1.80E-01	-1.26E-03	2.57E-04	1.44E-08	8.96E-03	6.79E-04
Construction process stage	Transport	A4	9.99E-04	9.98E-04	8.50E-07	3.92E-07	2.31E-10	4.05E-06	6.43E-08
	Construction	A5	7.58E-03	7.67E-03	-9.99E-05	8.17E-06	6.98E-10	2.72E-04	2.10E-05
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	7.26E-05	7.25E-05	6.18E-08	2.85E-08	1.68E-11	2.94E-07	4.67E-09
	Waste processing	C3	7.12E-02	7.11E-02	1.35E-04	1.68E-05	8.26E-09	1.07E-04	1.97E-05
	Disposal	C4	2.43E-03	2.42E-03	2.97E-06	5.54E-07	2.87E-10	3.63E-06	6.84E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.94E-01	-1.94E-01	-1.48E-04	-2.05E-04	-9.82E-09	-8.36E-03	-6.40E-04
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	7.26E-05	7.25E-05	6.18E-08	2.85E-08	1.68E-11	2.94E-07	4.67E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	8.47E-02	8.45E-02	1.04E-04	1.93E-05	1.00E-08	1.27E-04	2.39E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			EP-marine	EP-terrestrial	POCP	ADP-mineral &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	4.46E-04	6.10E-03	1.72E-03	2.04E-04	2.34E+00	1.56E-01	2.31E-08
	Transport	A2	5.93E-05	6.58E-04	1.72E-04	1.72E-08	1.23E-01	3.60E-04	4.06E-10
	Manufacturing	A3	3.25E-05	9.89E-05	2.29E-05	3.94E-08	9.23E-02	1.20E-02	5.54E-10
	Total (Consumption grid)	A1-3	5.38E-04	6.86E-03	1.92E-03	2.04E-04	2.56E+00	1.68E-01	2.41E-08
Construction process stage	Transport	A4	1.22E-06	1.33E-05	4.08E-06	3.47E-09	1.51E-02	6.79E-05	8.61E-11
	Construction	A5	1.66E-05	2.11E-04	5.87E-05	6.12E-06	8.64E-02	5.39E-03	7.31E-10
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	8.86E-08	9.69E-07	2.97E-07	2.52E-10	1.10E-03	4.93E-06	6.26E-12
	Waste processing	C3	2.49E-05	2.39E-04	6.64E-05	1.48E-07	3.39E-01	1.09E-02	1.09E-09
	Disposal	C4	7.91E-07	7.79E-06	2.13E-06	4.83E-09	1.14E-02	3.55E-04	3.42E-11
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.40E-04	-5.96E-03	-1.73E-03	-1.94E-04	-2.95E+00	-1.70E-01	-2.34E-08
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	8.86E-08	9.69E-07	2.97E-07	2.52E-10	1.10E-03	4.93E-06	6.26E-12
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	2.76E-05	2.72E-04	7.44E-05	1.69E-07	3.98E-01	1.24E-02	1.19E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts							
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.41E-02	6.89E+01	1.58E-09	1.14E-07	2.76E+00
	Transport	A2	5.76E-04	8.09E-02	5.09E-12	6.25E-11	3.45E-02
	Manufacturing	A3	1.03E-03	6.37E-01	1.13E-11	2.28E-10	2.53E-01
	Total (Consumption grid)	A1-3	1.57E-02	6.96E+01	1.59E-09	1.14E-07	3.04E+00
Construction process stage	Transport	A4	7.75E-05	1.18E-02	3.81E-13	1.23E-11	1.04E-02
	Construction	A5	5.35E-04	2.13E+00	4.91E-11	3.43E-09	9.32E-02
97.2% - Recycling 2.8% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.64E-06	8.56E-04	2.77E-14	8.97E-13	7.53E-04
	Waste processing	C3	2.23E-03	1.36E+00	4.58E-11	5.22E-10	8.66E-02
	Disposal	C4	7.44E-05	4.70E-02	1.51E-12	1.76E-11	2.43E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.26E-02	-6.51E+01	-1.48E-09	-1.08E-07	-2.63E+00
100% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.64E-06	8.56E-04	2.77E-14	8.97E-13	7.53E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	2.60E-03	1.64E+00	5.28E-11	6.13E-10	8.49E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

LCA Results (continued)

Parameters describing resource use, primary energy

			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	1.31E+00	0.00E+00	1.31E+00	1.96E+00	5.24E-01	2.49E+00
	Transport	A2	1.07E-03	0.00E+00	1.07E-03	1.21E-01	0.00E+00	1.21E-01
	Manufacturing	A3	2.00E-03	6.41E-02	6.61E-02	7.20E-02	1.46E-03	7.34E-02
	Total (Consumption grid)	A1-3	1.31E+00	6.41E-02	1.37E+00	2.16E+00	5.25E-01	2.68E+00
Construction process stage	Transport	A4	2.12E-04	0.00E+00	2.12E-04	1.48E-02	0.00E+00	1.48E-02
	Construction	A5	-1.29E-02	5.41E-02	4.12E-02	6.47E-02	1.58E-02	8.04E-02
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.54E-05	0.00E+00	1.54E-05	1.08E-03	0.00E+00	1.08E-03
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	-2.76E-01	2.76E-01	0.00E+00
	Disposal	C4	4.78E-04	0.00E+00	4.78E-04	-5.74E-03	1.70E-02	1.13E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.23E+00	0.00E+00	-1.23E+00	-1.49E+00	-1.54E-01	-1.65E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.54E-05	0.00E+00	1.54E-05	1.08E-03	0.00E+00	1.08E-03
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.67E-02	0.00E+00	1.67E-02	-2.00E-01	5.93E-01	3.93E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	3.38E-05	0.00E+00	0.00E+00	3.80E-03
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.90E-06
	Manufacturing	A3	5.32E-05	0.00E+00	0.00E+00	2.84E-04
	Total (Consumption grid)	A1-3	8.70E-05	0.00E+00	0.00E+00	4.09E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	1.68E-06
	Construction	A5	2.61E-06	0.00E+00	0.00E+00	1.31E-04
97.2% - Recycling 2.8% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	1.22E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	2.64E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	8.51E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.66E-07	0.00E+00	0.00E+00	-4.13E-03
100% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	1.22E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	2.97E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

LCA Results (continued)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	4.87E-02	2.00E+00	1.03E-05
	Transport	A2	1.57E-04	1.62E-03	8.49E-07
	Manufacturing	A3	4.78E-04	1.40E-02	3.99E-07
	Total (Consumption grid)	A1-3	4.93E-02	2.02E+00	1.16E-05
Construction process stage	Transport	A4	1.66E-05	2.95E-04	1.02E-07
	Construction	A5	1.48E-03	6.05E-02	3.48E-07
97.2% - Recycling 2.8% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.21E-06	2.15E-05	7.42E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.42E-03	6.93E-04	6.71E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.32E-02	-1.85E+00	-8.45E-06
100% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.21E-06	2.15E-05	7.42E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	4.96E-02	2.42E-02	2.34E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00

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

LCA Results (continued)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	1.34E-06	1.33E-08	7.93E-04	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	2.74E-04	2.57E-09	2.09E-04	0.00E+00	1.65E-03
	Total (Consumption grid)	A1-3	0.00E+00	2.75E-04	1.58E-08	1.00E-03	0.00E+00	1.65E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	8.26E-06	4.75E-10	3.01E-05	0.00E+00	4.95E-05
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	3.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	-1.69E-07	-2.59E-11	-4.24E-04	0.00E+00	0.00E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results - 1m of Cat6 Mini Patch Lead U/UTP Unshielded with 0.022 kg/m

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	9.77E-02	9.73E-02	2.54E-04	1.07E-04	9.55E-09	4.06E-03	3.12E-04
	Transport	A2	5.88E-03	5.87E-03	6.02E-07	3.83E-06	1.21E-09	1.53E-04	2.35E-07
	Manufacturing	A3	1.17E-02	1.27E-02	-1.05E-03	2.70E-05	1.14E-09	5.20E-05	5.18E-06
	Total (Consumption grid)	A1-3	1.15E-01	1.16E-01	-7.92E-04	1.38E-04	1.19E-08	4.27E-03	3.17E-04
Construction process stage	Transport	A4	6.30E-04	6.29E-04	5.36E-07	2.47E-07	1.46E-10	2.55E-06	4.05E-08
	Construction	A5	4.91E-03	5.00E-03	-1.00E-04	4.41E-06	5.33E-10	1.30E-04	9.97E-06
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.90E-05	5.89E-05	5.35E-08	2.77E-08	1.33E-11	2.34E-07	4.43E-09
	Waste processing	C3	3.89E-02	3.88E-02	6.97E-05	9.54E-06	4.46E-09	5.95E-05	1.06E-05
	Disposal	C4	1.44E-03	1.44E-03	2.95E-06	3.20E-07	1.70E-10	2.09E-06	4.07E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.12E-01	-1.12E-01	-1.78E-04	-1.01E-04	-8.38E-09	-3.97E-03	-3.01E-04
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.90E-05	5.89E-05	5.35E-08	2.77E-08	1.33E-11	2.34E-07	4.43E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	5.29E-02	5.28E-02	1.08E-04	1.17E-05	6.22E-09	7.67E-05	1.49E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			EP-marine	EP-terrestrial	POCP	ADP-mineral &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	2.20E-04	2.97E-03	8.48E-04	9.32E-05	1.48E+00	8.26E-02	1.23E-08
	Transport	A2	3.78E-05	4.20E-04	1.10E-04	1.09E-08	7.83E-02	2.28E-04	2.57E-10
	Manufacturing	A3	3.56E-05	1.31E-04	3.13E-05	4.07E-08	1.15E-01	1.11E-02	7.45E-10
	Total (Consumption grid)	A1-3	2.94E-04	3.52E-03	9.89E-04	9.32E-05	1.67E+00	9.40E-02	1.33E-08
Construction process stage	Transport	A4	7.69E-07	8.40E-06	2.57E-06	2.19E-09	9.51E-03	4.28E-05	5.43E-11
	Construction	A5	9.02E-06	1.08E-04	3.00E-05	2.80E-06	5.61E-02	3.06E-03	3.92E-10
97.2% - Recycling 2.8% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.82E-08	7.45E-07	2.29E-07	2.69E-10	8.80E-04	4.48E-06	4.39E-12
	Waste processing	C3	1.43E-05	1.36E-04	3.81E-05	8.38E-08	1.90E-01	6.05E-03	6.38E-10
	Disposal	C4	4.67E-07	4.59E-06	1.25E-06	2.86E-09	6.62E-03	2.18E-04	1.99E-11
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.18E-04	-2.93E-03	-8.59E-04	-9.04E-05	-1.74E+00	-8.96E-02	-1.24E-08
100% - Landfill									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.82E-08	7.45E-07	2.29E-07	2.69E-10	8.80E-04	4.48E-06	4.39E-12
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.71E-05	1.68E-04	4.59E-05	1.05E-07	2.43E-01	7.99E-03	7.30E-10
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts							
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	7.92E-03	3.20E+01	7.37E-10	5.24E-08	1.29E+00
	Transport	A2	3.66E-04	5.13E-02	3.24E-12	3.96E-11	2.18E-02
	Manufacturing	A3	8.48E-04	6.97E-01	1.22E-11	2.56E-10	1.84E-01
	Total (Consumption grid)	A1-3	9.13E-03	3.27E+01	7.52E-10	5.27E-08	1.49E+00
Construction process stage	Transport	A4	4.89E-05	7.42E-03	2.40E-13	7.78E-12	6.53E-03
	Construction	A5	3.16E-04	1.01E+00	2.34E-11	1.59E-09	4.58E-02
97.2% - Recycling 2.8% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	4.67E-06	7.18E-04	2.62E-14	7.26E-13	5.20E-04
	Waste processing	C3	1.24E-03	7.33E-01	2.56E-11	2.88E-10	5.38E-02
	Disposal	C4	4.40E-05	2.81E-02	9.01E-13	1.04E-11	1.43E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-7.07E-03	-3.06E+01	-6.96E-10	-5.05E-08	-1.24E+00
100% - Landfill							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	4.67E-06	7.18E-04	2.62E-14	7.26E-13	5.20E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.61E-03	1.03E+00	3.30E-11	3.82E-10	5.24E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

LCA Results (continued)

Parameters describing resource use, primary energy								
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	6.07E-01	0.00E+00	6.07E-01	1.18E+00	3.96E-01	1.58E+00
	Transport	A2	6.77E-04	0.00E+00	6.77E-04	7.68E-02	0.00E+00	7.68E-02
	Manufacturing	A3	1.41E-02	4.36E-02	5.77E-02	2.05E-01	1.37E-03	2.06E-01
	Total (Consumption grid)	A1-3	6.22E-01	4.36E-02	6.66E-01	1.46E+00	3.97E-01	1.86E+00
Construction process stage	Transport	A4	1.34E-04	0.00E+00	1.34E-04	9.34E-03	0.00E+00	9.34E-03
	Construction	A5	-2.08E-02	4.08E-02	2.00E-02	4.38E-02	1.19E-02	5.58E-02
97.2% - Recycling 2.8% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	-2.63E-01	2.63E-01	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.79E-01	0.00E+00	-5.79E-01	-9.10E-01	-1.80E-01	-1.09E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	2.27E-05	0.00E+00	0.00E+00	2.01E-03
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	5.64E-06
	Manufacturing	A3	2.22E-05	0.00E+00	0.00E+00	2.66E-04
	Total (Consumption grid)	A1-3	4.48E-05	0.00E+00	0.00E+00	2.28E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	1.06E-06
	Construction	A5	1.35E-06	0.00E+00	0.00E+00	7.42E-05
97.2% - Recycling 2.8% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	1.11E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	1.46E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	5.25E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.50E-07	0.00E+00	0.00E+00	-2.17E-03
100% - Landfill						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	1.11E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.92E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

LCA Results (continued)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	2.60E-02	9.35E-01	5.29E-06
	Transport	A2	9.98E-05	1.03E-03	5.40E-07
	Manufacturing	A3	2.55E-03	2.40E-02	3.53E-07
	Total (Consumption grid)	A1-3	2.87E-02	9.60E-01	6.18E-06
Construction process stage	Transport	A4	1.05E-05	1.86E-04	6.43E-08
	Construction	A5	8.61E-04	2.88E-02	1.86E-07
97.2% - Recycling 2.8% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.63E-02	-8.75E-01	-4.20E-06
100% - Landfill					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00

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

LCA Results (continued)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	9.38E-07	8.87E-09	6.30E-04	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	1.14E-04	1.07E-09	8.70E-05	0.00E+00	1.36E-03
	Total (Consumption grid)	A1-3	0.00E+00	1.15E-04	9.94E-09	7.17E-04	0.00E+00	1.36E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	3.45E-06	2.98E-10	2.15E-05	0.00E+00	4.09E-05
100% - Recycling								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	2.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	-1.53E-07	-2.34E-11	-3.83E-04	0.00E+00	0.00E+00
100% - Landfill								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

Scenarios and additional technical information

Scenarios and additional technical information					
Scenario	Parameter			Units	Results
A4 – Transport to the building site	Mayflex receives the cable from PRC and without any further processing in the distribution sector they will be distributed to the customer site.				
	Fuel type / Vehicle type			Road transport	16–32-ton lorry
	Distance: Mayflex to customer site			km	172
	Capacity utilisation (incl. empty returns)			%	49
	Bulk density of transported products			kg/m^3	342
A5 – Installation in the building	Installation of data cables is carried out by manual labour - teams of operatives pulling and dressing cables. No powered equipment or consumable items are used in this process, so no waste is generated during the installation. But there are some wastes at the end of the box, and it was assumed as 3% of the cables waste; this will be collected and sent to recycling				
	CAT6 & CAT6A Patch Leads - UUTP Unshielded LSOH (kg/m)	**0.022**	**0.0349**	**0.0397**	**0.0480**
	Cable waste - End of the box	0.001	0.001	0.0012	0.0014
Packaging wastes	Cardboard waste – Recycling	0.0025	0.0021	0.0066	0.0045
	Plastic waste – Recycling	0.0003	0.001	0.0033	0.0029
End of life	Cables are removed manually from the building sites. Therefore, no energy is associated while removing the cables from the building.				
C2 – Transportation	Recovered cables are taken back by the registered broker			Road transport	16–32-ton lorry
	Distance: Deconstruction unit to pre-processing unit			km	12.5
C3 – Pre processing	CAT6 & CAT6A Patch Lead cables are made of copper, polymer, polyethylene, and other materials. At the end-of-life, cables are removed manually from the building sites, and they will be sent to pre-processing unit. At the pre-processing unit, waste cables are shredded first to decrease their size and the metallic parts are separated from plastics physically by using gravity and electrostatic separation techniques. The copper is recovered from other metallic elements by smelting and refining. The shredding and separation, and smelting processes have not been included in module C3 because it is assumed to be very small and are effectively negligible. (Celik et al., 2019).				
	Recovered cable to recycling			%	97.2
C4 – Disposal	The recovered cable is sent recycling while a small portion is assumed to be unrecoverable which is considered to send to landfill.				
	Unrecovered cables sent to landfill			%	2.8
Module D	It is assumed that 97.2% of the cable used in the construction building is recovered for recycling and remaining 2.8% is sent to landfill. The calculation assumes that there is no yield-loss during the recycling process.				
	CAT6 & CAT6A Patch Leads - UUTP Unshielded LSOH (kg/m)	**0.022**	**0.0349**	**0.0397**	**0.0480**
	Recycling – 97.2 %	0.0214	0.0339	0.0386	0.0470
	Landfill – 2.8%	0.0006	0.0010	0.0011	0.0010

Interpretation of results:

The bulk of the environmental impacts are attributed to the manufacturing of CAT6 & CAT6A Patch Leads - UUTP Unshielded LSOH covered by information modules A1-A3 of EN15804:2012+A2:2019.

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