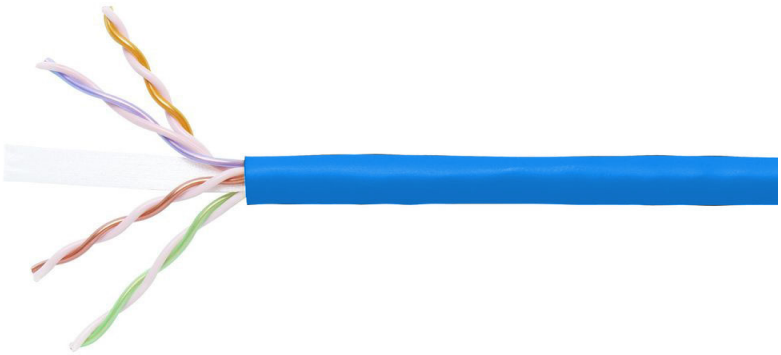
Environmental Product Declaration
CommScope Cat 6 Plenum Data Networking Cable



Cat 6 Plenum cable is a four pair premise horizontal cable and the Cat 6 Plenum LAN cable is a four pair Plenum rated LAN cable.

At CommScope, we believe that corporate responsibility and sustainability means making decisions that have a positive impact on our people, planet and bottom line. CommScope's leaders have adopted a philosophy on corporate responsibility that embraces our core company values and holds us accountable to produce smart solutions that respect our people and our planet:
Meaningful integrity is a decisive personal and company-wide commitment to enable faster, smarter and more sustainable solutions while demonstrating the utmost respect for our human and natural resources. This philosophy finds form in three pillars:
- Environmental
- Social
- Governance

Our commitment enables us to invest wisely in our future. By utilizing innovative technology, intelligent engineering and
energy-efficient designs, we're building sustainable networks that make our customers more agile while also preserving the natural ecosystems from which we source our raw materials.

ASTM INTERNATIONAL

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025, EN 15804, and ISO 21930-2017. EPDs rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc. Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effect differs for any particular product line and reported impact. Comparability: EPDs are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	ASTM Program Operator for Product Category Rules (PCR) and Environmental Product Declarations (EPDs). General Program Instructions. Version 8.0. April 29, 2020.
MANUFACTURER NAME AND ADDRESS	CommScope, Inc. 1100 CommScope Place Southeast Hickory, NC 28602
DECLARATION NUMBER	EPD 275
DECLARED PRODUCT & FUNCTIONAL UNIT OF DECLARED UNIT	CommScope Cat 6 Plenum Data Networking Cable Functional Unit = 1 meter of installed cable over a 60 year building lifetime
REFERENCE PCR AND VERSION NUMBER	The Norwegian EPD Foundation: NPCR 027 Part B: Electrical Cables and Wires, v1.0, October 2020.
DESCRIPTION OF PRODUCT APPLICATION/USE	CommScope cable products are primarily used in commercial, residential, and educational settings.
PRODUCT RSL DESCRIPTION	30 Years
MARKETS OF APPLICABILITY	Global
DATE OF ISSUE	November 15, 2021
PERIOD OF VALIDITY	5 Years
EPD TYPE	Product Specific
DATASET VARIABILITY	N/A
EPD SCOPE	Cradle-to-Grave
YEAR(S) OF REPORTED PRIMARY DATA	2019
LCA SOFTWARE & VERSION NUMBER	SimaPro v9.1
LCI DATABASE(S) & VERSION NUMBER	Ecoinvent v3.5 & USLCI v2.0
LCIA METHODOLOGY & VERSION NUMBER	TRACI 2.1; CML 4.1

The sub-category PCR review was conducted by:	
This declaration was independently verified in accordance with ISO 14025: 2006. The Norwegian EPD Foundation: NPCR 027 Part B: Electrical Cables and Wires, v1.0, October 2020, serves as the core PCR, with additional considerations from CEN Norm EN 15804 (2013) ☐ INTERNAL ☒ EXTERNAL	Timothy S Brooke ASTM International
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	
	Thomas P. Gloria, Ph. D. Industrial Ecology Consultants

Environmental declarations from different programs (ISO 14025) may not be comparable.

Comparison of the environmental performance using EPD information shall consider all relevant information modules over the full life cycle of the products within the building.

This PCR allows EPD comparability only when the same functional requirements between products are ensured and the requirements of ISO 21930:2017 §5.5 are met. It should be noted that different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

General Information

Description of Company/Organization

CommScope (NASDAQ: COMM) is one of the world's premier network solution providers—transforming connectivity for telecommunications, business enterprise, TV and broadband service providers and ventures across the globe. CommScope helps design, build and manage wired and wireless networks around the world. As a communications infrastructure leader, we shape the always-on networks of tomorrow. For more than 40 years, our global team of more than 30,000 employees, innovators and technologists has empowered customers to anticipate what's next and push the boundaries of what's possible.

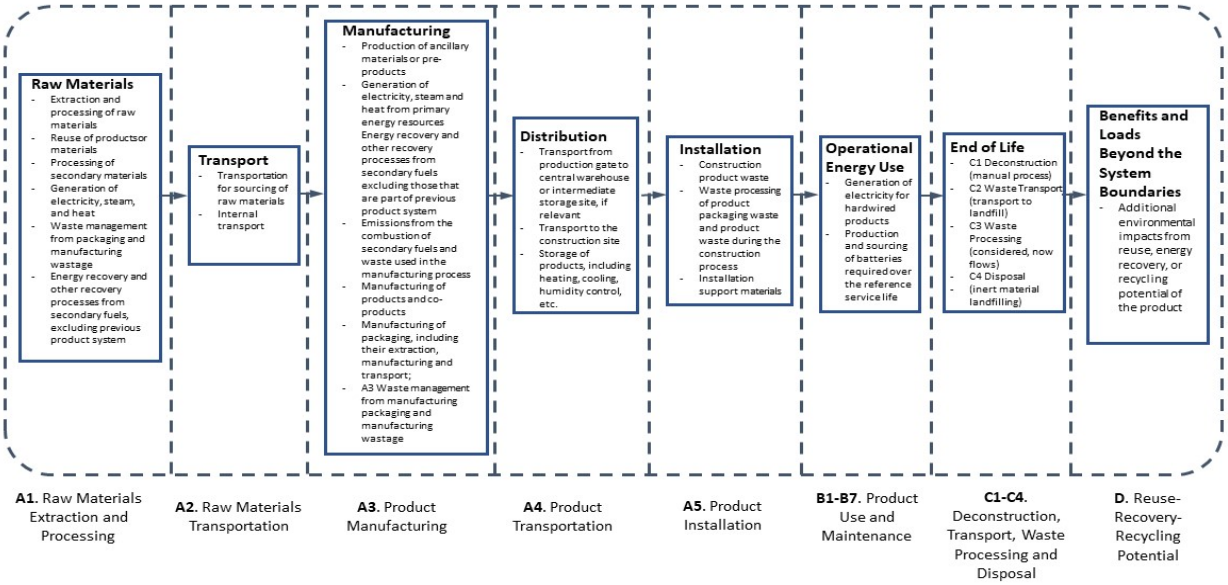
Product Description

Cat 6 Plenum cable is a four pair premise horizontal cable.

Product Type: Cat 6 Plenum LAN cable
Product Characteristic: Four pair Plenum rated LAN cable.
The Cat 6 Plenum LAN cable is a four pair Plenum rated LAN cable.

This EPD Covers the CommScope Cat 6 Plenum cable product family, including:
• UTP CAT 6 Plenum - Product ID: CS37P, CS34P, and 2071E
• UTP I/O CAT 6 Plenum - Product ID: CS34P-IO

Flow Diagram



Manufacturer Specific EPD

This product-specific EPD was developed based on the cradle-to-grave (modules A1-D) Life Cycle Assessment. The EPD accounts for raw material extraction and processing, transport, product manufacturing, distribution, installation, use, maintenance, disposal, and potential benefits and loads following the end of life disposal. Manufacturing data were gathered directly from company personnel. For any product group EPDs, an impact assessment was completed for each product and the lowest and highest impacts were reported as representations of the product group. Product grouping was considered appropriate if the individual product impacts differed by no more than ±10% in any impact category.

Application

The Cat 6 Plenum rated cable is appropriate for Plenum rated LAN cabling applications including 1000BASE-T, 1000BASE-TX, 100BASE-TX, 10BASE-T, 155Mbps ATM, TP-PMD, Token Ring, VoIP.

Material Composition

The primary product components and/or materials must be indicated as a percentage mass to enable the user of the EPD to understand the composition of the product in delivery status.

The average composition of a CommScope Cat 6 Plenum Data Networking cable is as follows:
Note: The minimum and maximum values represent the minimum and maximum impact products within this product familyThe increase in impact results from the increased weight of colorant and insulation materials.

	Percentage in mass (%)	
Material	**Minimum**	**Maximum**
Colorant	0.13%	1.40%
Conductor	47.36%	43.88%
Cross Filler	0.00%	0.00%
Drain Wire	0.00%	0.00%
Insulation	15.40%	23.89%
Jacketing	35.48%	30.83%
Rip Cord	0.00%	0.00%
Tape	1.63%	0.00%
Other	0.00%	0.00%
Total	100.00%	100.00%

Placing on the Market / Application Rules

CMP, NEC Article 800, UL 910, and UL 444 safety standards. The cable also complies with ANSI/TIA-568.2-D, CENELEC EN 50288-6-1, and ISO/IEC 11801 Class E transmission standards.

Properties of Declared Product as Shipped

CommScope Cat 6 Plenum Data Networking cables are delivered as a complete unit, inclusive of all installation materials and instructions.

Methodological Framework

Functional Unit

The declaration refers to the functional unit of 1 meter of installed cable as specified in the PCR.

Name	Value	Unit
Declared unit	1 meter of installed cable	
Minimum Mass	0.04	kg
Conversion factor to 1 kg	26.27	-
Maximum Mass	0.08	kg
Conversion factor to 1 kg	12.10	-

System Boundary

This is a cradle to grave Environmental Product Declaration. The following life cycle phases were considered:

Product Stage			Construction Process Stage		Use Stage							End of Life Stage*				Benefits and Loads Beyond the System Boundaries
Raw material supply	Transport	Manufacturing	Transport from gate to the site	Construction/ installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction /demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Description of the System Boundary Stages Corresponding to the PCR

(X = Included; MND = Module Not Declared)

*This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.

Reference Service Life

The reference service life of a properly installed CommScope Cat 6 Plenum Data Networking cable is 30 years. The building estimated service life is 60 years.

Allocation

Allocation was determined on a per meter basis.

Cut-off Criteria

Processes whose total contribution to the final result, with respect to their mass and in relation to all considered impact categories, is less than 1% can be neglected. The sum of the neglected processes may not exceed 5% by mass of the considered impact categories. For that a documented assumption is admissible.

For Hazardous Substances the following requirements apply:

- The Life Cycle Inventory (LCI) of hazardous substances will be included, if the inventory is available.
- If the LCI for a hazardous substance is not available, the substance will appear as an input in the LCI of the product, if its mass represents more than 0.1% of the product composition.
- If the LCI of a hazardous substance is approximated by modeling another substance, documentation will be provided.

This EPD is in compliance with the cut-off criteria. No processes were neglected or excluded. Capital items for the production processes (machine, buildings, etc.) were not taken into consideration.

Data Sources

Primary data were collected for every process in the product system under the control of CommScope. Secondary data from the ecoinvent database were utilized when necessary. These data were evaluated and have temporal, geographic, and technical coverage appropriate to the scope of the product category.

Data Quality

The data sources used are complete and representative of global systems in terms of the geographic and technological coverage and are a recent vintage (i.e. less than ten years old). The data used for primary data are based on direct information sources of the manufacturers. Secondary data sets were used for raw materials extraction and processing, end of life, transportation, and energy production flows. Wherever secondary data is used, the study adopts critically reviewed data for consistency, precision, and reproducibility to limit uncertainty.

Period Under Review

The period under review is the full calendar year of 2019.

Treatment of Biogenic Carbon

The uptake and release of biogenic carbon throughout the product life cycle follows ISO 21930:2017 Section 7.2.7.

Comparability and Benchmarking

A comparison or an evaluation of EPD data is only possible if all data sets to be compared were created according to EN 15804 and the building context, respectively the product-specific characteristics of performance, are taken into account. Environmental declarations from different programs may not be comparable. Full conformance with the PCR allows for EPD comparability only when all stages a product's life cycle have been considered. However, variations and deviations are possible.

Units

The LCA results within this EPD are reported in SI units.

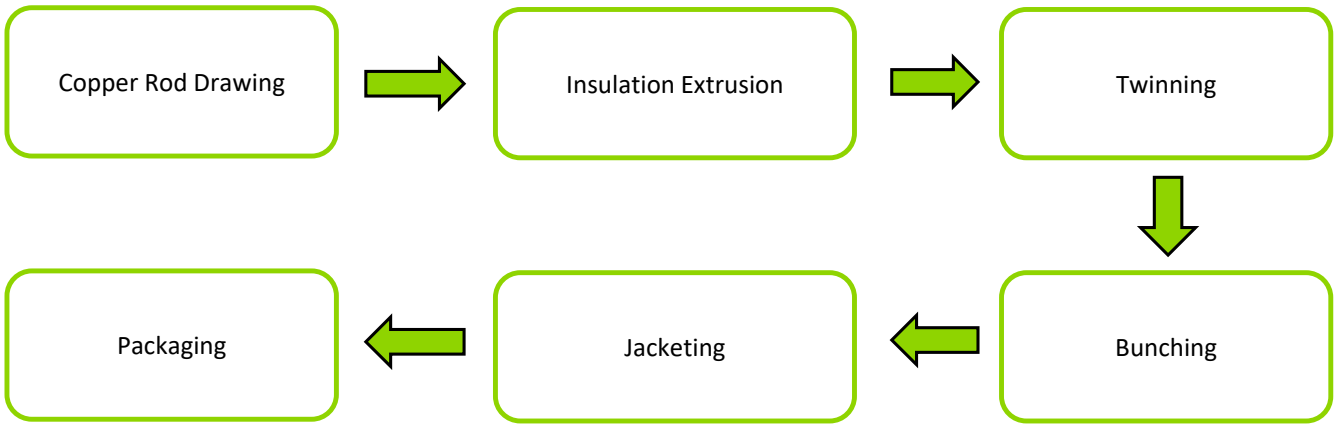
Additional Environmental Information

Background data

For life cycle modeling of the considered products, the SimaPro v9.1 Software System for Life Cycle Engineering, developed by PRe Sustainability, is used. The ecoinvent database contains consistent and documented datasets which are documented online. To ensure comparability of results in the LCA, the basic data of the ecoinvent database were used for energy, transportation, and auxiliary materials.

Manufacturing

The primary manufacturing processes occur in multiple locations. Copper wire goes through two drawing processes with an immediate subsequent annealing process. The wire continues down the line to an extruder where the insulation material is applied to the wire. Cooling and drying of the insulated wire then occurs. Two of these insulated wires are then twinned together around each other. Four twinned wire pairs, along with other cable components such as separator tape and/or shielding material, are then bunched together. Subsequently, the bunched wire has a jacket extruded around the bunched cable. After the jacket is applied, the cable is cooled and packaged. Various packaging options exist, but most product is shipped in 1000-foot length spools and/or boxes.



Packaging

All packaging is fully recyclable. The packaging material is composed primarily of wood, with cardboard and plastic materials used for individual product packaging.
Note: The minimum and maximum values represent the minimum and maximum impact products within this product family.

	Quantity (% By Weight)	
Material	**Minimum**	**Maximum**
Cardboard	38.95%	38.95%
Other	3.13%	3.13%
Plastic	12.28%	12.28%
Wood	45.65%	45.65%
Total	100.00%	100.00%

Transformation

Transport to Building Site (A4)			
Name	**Min**	**Max**	**Unit**
Fuel type	Diesel		
Liters of fuel	38	38	l/100km
Transport distance	300	300	km
Capacity utilization (including empty runs)	-	-	%
Gross density of products transported	-	-	kg/m^3
Weight of products transported	-	-	kg
Volume of products transported	-	-	m^3
Capacity utilization volume factor	-	-	-

Product Installation

CommScope Cat 6 Plenum Data Networking cables are distributed through and installed by trained installation technicians adhering to local/national standards and requirements. Installation accounts for the energy consumption, material wastage, and support materials use during the installation process, as well as waste treatment of packaging materials. The installation scrap was assumed to be a 5% average in accordance with the PCR. Installation is typically completed using battery-powered equipment and can therefore be neglected due to the amount of electricity that is consumed during the use phase.

Installation into the building (A5)			
Name	**Min**	**Max**	**Unit**
Auxiliary materials	-	-	kg
Water consumption	-	-	m^3
Other resources	-	-	kg
Electricity consumption	-	-	kWh
Other energy carriers	-	-	MJ
Product loss per functional unit	0.00	0.00	kg
Waste materials at construction site	0.00	0.00	kg
Output substance (recycle)	0.00	0.00	kg
Output substance (landfill)	0.00	0.00	kg
Output substance (incineration)	0.00	0.00	kg
Packaging waste (recycle)	0.00	0.00	kg
Packaging waste (landfill)	0.00	0.00	kg
Packaging waste (incineration)	0.00	0.00	kg
Direct emissions to ambient air*, soil, and water	0.00	0.00	kg CO_2
VOC emissions	-	-	kg

*CO2 emissions to air from disposal of packaging

Reference Service Life		
Name	**Value**	**Unit**
Reference Service Life	30	years
Estimated Building Service Life	60	years
Number of Replacements	1	number

Product Use

No cleaning, maintenance, repair, or refurbishment is required.

Operational energy use was modeled as use phase losses determined by the IEC 61156-5 standard. The maximum loss values for each cable category are detailed in the table below and were used in the B6 stage.

Operational Energy Use (B6)			
Name	**Min**	**Max**	**Unit**
Water consumption (from tap, to sewer)	-	-	m^3
Electricity consumption	0.42	0.42	kWh
Other energy carriers	-	-	MJ
Equipment output	-	-	kW
Direct emissions to ambient air, soil, and water	-	-	kg

Maximum Loss Values per Cable Type		
Cable Type	**Protocol**	**Power Loss (mW/m)**
CAT5e	Ethernet 100M	0.454
CAT6	1G Ethernet	0.565
CAT6a	10G Ethernet	1.364
CAT7	10G Ethernet	1.363
CAT7a	10G Ethernet	1.356
CAT7+	10G Ethernet	1.351

Disposal

The product can be mechanically dissembled to separate the different materials. 85% of the metals used are recyclable. The remainder of components are disposed of through waste incineration with energy recovery, in accordance with the PCR, with the exception of fiberglass which would be landfilled.

End of life (C1-C4)			
Name	**Min**	**Max**	**Unit**
Collected separately	0.02	0.03	kg
Collected as mixed construction waste	0.02	0.05	kg
Reuse	0.00	0.00	kg
Recycling	0.02	0.03	kg
Landfilling	0.00	0.01	kg
Incineration with energy recovery	0.02	0.05	kg
Energy conversion	44.00	44.00	%
Removals of biogenic carbon	-	-	kg

Re-use Phase

Re-use of the product is not common due to the nature of hard-wiring the product into the building system.

Re-Use, recovery, And/Or Recycling Potential (D)			
Name	**Min**	**Max**	**Unit**
Net energy benefit from energy recovery from waste treatment declared as exported energy in C3 (R>0.6)	0.27	0.68	MJ
Net energy benefit from thermal energy due to treatment of waste declared as exported energy in C4 (R<0.6)	0.00	0.00	MJ
Net energy benefit from material flow declared in C3 for energy recovery	0.00	0.00	MJ
Process and conversion efficiencies			
Further assumptions for scenario development (e.g. further processing technologies, assumptions on correction factors);			

LCA Results - Minimum Impact

Results shown below were calculated using TRACI 2.1 Methodology.

TRACI 2.1 Impact Assessment

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
GWP	Global warming potential	kg CO_2-Eq.	3.06E-01	1.11E-03	6.93E-04	3.60E-01	2.76E-01	3.53E-04	5.04E-02	1.18E-03	-2.58E-01	7.38E-01
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	1.16E-06	4.24E-14	4.20E-12	1.16E-06	4.45E-12	1.35E-14	1.02E-09	8.34E-11	-1.71E-08	2.31E-06
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	3.83E-03	6.64E-06	4.21E-07	3.86E-03	2.38E-03	2.11E-06	2.28E-05	3.48E-06	-4.83E-03	5.27E-03
EP	Eutrophication potential	kg N-Eq.	1.83E-02	3.70E-07	8.92E-06	1.84E-02	3.21E-05	1.18E-07	1.16E-05	1.04E-05	-2.74E-02	9.30E-03
SP	Smog formation potential	kg O_3-Eq.	6.46E-02	1.82E-04	9.87E-06	6.52E-02	1.58E-02	5.78E-05	3.55E-04	7.22E-05	-9.11E-02	5.52E-02
FFD	Fossil Fuel Depletion	MJ-surplus	4.23E-01	2.13E-03	1.11E-04	4.32E-01	2.39E-01	6.77E-04	4.62E-03	8.21E-04	-2.35E-01	8.68E-01

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results shown below were calculated using CML 2001 - April 2013 Methodology.

CML 4.1 Impact Assessment

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
GWP	Global warming potential	kg CO_2-Eq.	3.06E-01	1.12E-03	8.01E-04	3.60E-01	2.76E-01	3.53E-04	5.04E-02	1.18E-03	-2.58E-01	7.39E-01
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	1.16E-06	4.20E-14	3.21E-12	1.16E-06	4.45E-12	1.35E-14	1.02E-09	8.34E-11	-1.71E-08	2.30E-06
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	3.43E-03	5.48E-06	3.37E-07	3.46E-03	2.38E-03	2.11E-06	2.28E-05	3.48E-06	-4.83E-03	4.47E-03
EP	Eutrophication potential	kg$(PO_4)^{3-}$-Eq.	8.10E-03	9.71E-07	3.28E-06	8.13E-03	3.21E-05	1.18E-07	1.16E-05	1.04E-05	-2.74E-02	-1.12E-02
POCP	Formation potential of tropospheric ozone photochemical oxidants	kg ethane-Eq.	1.31E-04	2.53E-07	1.29E-07	6.17E-04	1.58E-02	5.78E-05	3.55E-04	7.22E-05	-9.11E-02	-7.40E-02
ADPE	Abiotic depletion potential for non-fossil resources	kg Sb-Eq.	4.69E-05	0.00E+00	2.05E-10	6.16E-03	2.39E-01	6.77E-04	4.62E-03	8.21E-04	-2.35E-01	1.66E-02
ADPF	Abiotic depletion potential for fossil resources	MJ	4.09E+00	1.43E-02	7.81E-04	4.16E+00	2.78E-01	3.54E-04	5.05E-02	1.18E-03	-2.57E-01	8.33E+00

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain the resource use throughout the life cycle of the product.

Resource Use

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
RPR_E	Renewable primary energy as energy carrier	MJ	7.20E-01	0.00E+00	-9.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.61E-01
RPR_M	Renewable primary energy resources as material utilization	MJ	3.70E+00	3.85E+00	-3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E+00
$NRPR_E$	Nonrenewable primary energy as energy carrier	MJ	3.70E+00	1.43E-02	-2.54E+00	1.23E+00	3.85E+00	4.54E-03	4.29E-02	7.73E-03	-3.04E+00	3.25E+00
$NRPR_M$	Nonrenewable primary energy as material utilization	MJ	6.04E-01	0.00E+00	2.54E+00	3.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E+00
SM	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of nonrenewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	Energy recovered from disposed waste	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	m^3	2.05E-03	0.00E+00	3.78E-07	3.43E-03	0.00E+00	0.00E+00	1.37E-03	4.34E-06	-2.23E-03	4.62E-03

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain the output flows and wastes throughout the life cycle of the product.

Output Flows and Waste Categories

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
HWD	Hazardous waste disposed	kg	8.31E-08	0.00E+00	4.15E-09	8.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-07
NHWD	Non-hazardous waste disposed	kg	1.40E-04	0.00E+00	1.00E-03	3.84E-03	0.00E+00	0.00E+00	0.00E+00	2.70E-03	0.00E+00	7.69E-03
HLRW	High-level radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ILLRW	Intermediate- and low-level radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CRU	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	Materials for recycling	kg	1.41E-03	0.00E+00	2.67E-03	1.94E-02	0.00E+00	0.00E+00	1.53E-02	0.00E+00	0.00E+00	3.88E-02
MER	Materials for energy recovery	kg	0.00E+00	0.00E+00	2.49E-04	2.03E-02	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	4.06E-02
EE	Recovered energy exported from system	MJ	0.00E+00	0.00E+00	0.00E+00	2.66E-01	0.00E+00	0.00E+00	2.66E-01	0.00E+00	0.00E+00	5.32E-01

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain direct greenhouse gas emissions and removals throughout the life cycle of the product.

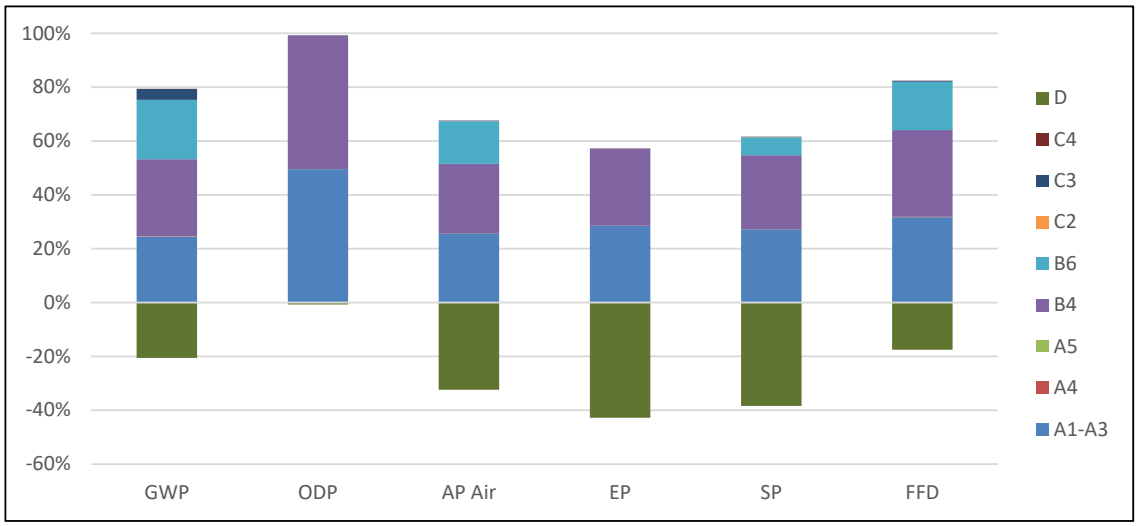
Resource Use

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
BCRP	Biogenic Carbon Removal from Product	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	Biogenic Carbon Emissions from Product	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	Biogenic Carbon Removal from Packaging	kg CO_2	1.20E-03	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-03
BCEK	Biogenic Carbon Emissions from Packaging	kg CO_2	0.00E+00	0.00E+00	1.20E-03	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-03
BCEW	Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	Calcination Carbon Emissions	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	Carbonation Carbon Removal	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

LCA Interpretation - Minimum Impact

The production life cycle stage (A1-A3) and in life energy usage (B6) dominate the impacts across all impact categories. This is due to the upstream production of materials used in the product, along with electricity use in the manufacturing of the product and the consumption of electricity during the cable's usage. With one replacement required over a life-span of a building, the replacement stage (B4) dominates from duplicating these stages. Significant impact reductions in the benefits and loads beyond system boundaries phase (D) can be attributed to energy produced from incineration of materials in the product that cannot be recycled.



LCA Results - Maximum Impact

Results shown below were calculated using TRACI 2.1 Methodology.

TRACI 2.1 Impact Assessment

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
GWP	Global warming potential	kg CO_2-Eq.	6.90E-01	2.42E-03	6.93E-04	8.12E-01	2.76E-01	7.67E-04	1.15E-01	2.67E-03	-4.87E-01	1.41E+00
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	4.93E-06	9.21E-14	4.20E-12	4.93E-06	4.45E-12	2.92E-14	2.32E-09	1.90E-10	-3.45E-08	9.83E-06
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	7.12E-03	1.44E-05	4.21E-07	7.20E-03	2.38E-03	4.58E-06	5.18E-05	7.90E-06	-9.47E-03	7.30E-03
EP	Eutrophication potential	kg N-Eq.	3.68E-02	8.04E-07	8.92E-06	3.69E-02	3.21E-05	2.55E-07	2.63E-05	2.36E-05	-5.54E-02	1.84E-02
SP	Smog formation potential	kg O_3-Eq.	1.26E-01	3.95E-04	9.87E-06	1.27E-01	1.58E-02	1.25E-04	8.08E-04	1.64E-04	-1.82E-01	8.81E-02
FFD	Fossil Fuel Depletion	MJ-surplus	1.14E+00	4.63E-03	1.11E-04	1.16E+00	2.39E-01	1.47E-03	1.05E-02	1.87E-03	-4.46E-01	2.12E+00

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results shown below were calculated using CML 2001 - April 2013 Methodology.

CML 4.1 Impact Assessment

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
GWP	Global warming potential	kg CO_2-Eq.	6.90E-01	2.42E-03	8.01E-04	8.11E-01	2.76E-01	7.67E-04	1.15E-01	2.67E-03	-4.87E-01	1.41E+00
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	4.92E-06	9.13E-14	3.21E-12	4.92E-06	4.45E-12	2.92E-14	2.32E-09	1.90E-10	-3.45E-08	9.81E-06
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	6.29E-03	1.19E-05	3.37E-07	6.36E-03	2.38E-03	4.58E-06	5.18E-05	7.90E-06	-9.47E-03	5.64E-03
EP	Eutrophication potential	kg$(PO_4)^3$-Eq.	1.62E-02	2.11E-06	3.28E-06	1.63E-02	3.21E-05	2.55E-07	2.63E-05	2.36E-05	-5.54E-02	-2.27E-02
POCP	Formation potential of tropospheric ozone photochemical oxidants	kg ethane-Eq.	3.16E-04	5.49E-07	1.29E-07	1.41E-03	1.58E-02	1.25E-04	8.08E-04	1.64E-04	-1.82E-01	-1.63E-01
ADPE	Abiotic depletion potential for non-fossil resources	kg Sb-Eq.	9.40E-05	0.00E+00	2.05E-10	1.39E-02	2.39E-01	1.47E-03	1.05E-02	1.87E-03	-4.46E-01	-1.78E-01
ADPF	Abiotic depletion potential for fossil resources	MJ	9.66E+00	3.11E-02	7.81E-04	9.81E+00	2.78E-01	7.69E-04	1.15E-01	2.68E-03	-4.86E-01	1.94E+01

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain the resource use throughout the life cycle of the product.

Resource Use

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
RPR_E	Renewable primary energy as energy carrier	MJ	1.39E+00	0.00E+00	-1.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.88E-01
RPR_M	Renewable primary energy resources as material utilization	MJ	8.50E+00	3.85E+00	-5.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E+00
$NRPR_E$	Nonrenewable primary energy as energy carrier	MJ	8.50E+00	3.11E-02	-2.54E+00	6.12E+00	3.85E+00	9.86E-03	9.74E-02	1.76E-02	-5.68E+00	1.04E+01
$NRPR_M$	Nonrenewable primary energy as material utilization	MJ	1.54E+00	0.00E+00	2.54E+00	4.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E+00
SM	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of nonrenewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	Energy recovered from disposed waste	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	m^3	3.75E-03	0.00E+00	3.78E-07	6.86E-03	0.00E+00	0.00E+00	3.11E-03	9.87E-06	-4.51E-03	9.22E-03

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain the output flows and wastes throughout the life cycle of the product.

Output Flows and Waste Categories

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
HWD	Hazardous waste disposed	kg	8.31E-08	0.00E+00	4.15E-09	8.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-07
NHWD	Non-hazardous waste disposed	kg	1.40E-04	0.00E+00	1.00E-03	6.58E-03	0.00E+00	0.00E+00	0.00E+00	5.44E-03	0.00E+00	1.32E-02
HLRW	High-level radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ILLRW	Intermediate- and low-level radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CRU	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	Materials for recycling	kg	1.41E-03	0.00E+00	2.67E-03	3.49E-02	0.00E+00	0.00E+00	3.08E-02	0.00E+00	0.00E+00	6.98E-02
MER	Materials for energy recovery	kg	0.00E+00	0.00E+00	2.49E-04	4.67E-02	0.00E+00	0.00E+00	4.64E-02	0.00E+00	0.00E+00	9.33E-02
EE	Recovered energy exported from system	MJ	0.00E+00	0.00E+00	0.00E+00	6.77E-01	0.00E+00	0.00E+00	6.77E-01	0.00E+00	0.00E+00	1.35E+00

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

Results below contain direct greenhouse gas emissions and removals throughout the life cycle of the product.

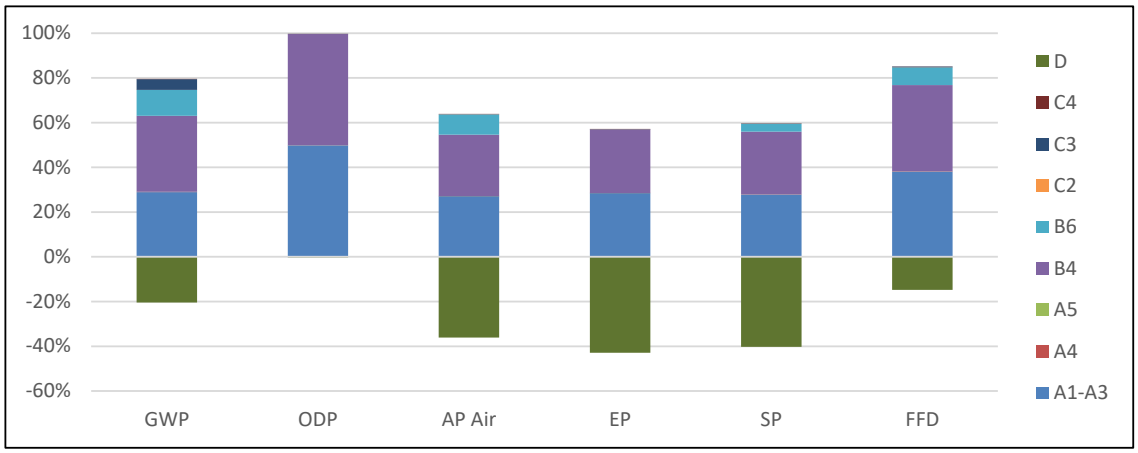
Resource Use

Parameter	Parameter	Unit	A1-A3	A4	A5	B4	B6	C2	C3	C4	D	Total
BCRP	Biogenic Carbon Removal from Product	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	Biogenic Carbon Emissions from Product	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	Biogenic Carbon Removal from Packaging	kg CO_2	1.20E-03	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-03
BCEK	Biogenic Carbon Emissions from Packaging	kg CO_2	0.00E+00	0.00E+00	1.20E-03	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-03
BCEW	Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	Calcination Carbon Emissions	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	Carbonation Carbon Removal	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**All use phase and disposal stages have been considered and only those with non-zero values have been reported*

LCA Interpretation - Maximum Impact

The production life cycle stage (A1-A3) and in life energy usage (B6) dominate the impacts across all impact categories. This is due to the upstream production of materials used in the product, along with electricity use in the manufacturing of the product and the consumption of electricity during the cable's usage. With one replacement required over a life-span of a building, the replacement stage (B4) dominates from duplicating these stages. Significant impact reductions in the benefits and loads beyond system boundaries phase (D) can be attributed to energy produced from incineration of materials in the product that cannot be recycled.



Additional Environmental Information

Environmental and Health During Manufacturing

CommScope values employees' health, safety and well-being. To this end, we maintain a robust company-wide environment, health and safety (EHS) management system. This is an integrated program based on the requirements of the International Standards of ISO45001 and ISO14001. To support this integrated EHS management system, CommScope utilizes a web-based platform, the BSI Entropy™ tool. This tool supports the management of our EHS processes and operations at the corporate and facility level. All EHS management system records (policies, procedures, method statements, health and safety risk assessments, environmental aspect/impact assessments, legal requirements, permits, training, internal and external audits, incidents and implemented CAPA, KPIs, and other records related to EHS) are maintained and managed in Entropy. In addition, all CommScope major manufacturing facilities are certified according to the ISO14001 and ISO45001 standards. Our vision and committments are detailed in our EHS Policy.

CommScope understands the need to address the environmental impacts of its products and services. CommScope engages product development teams in designing innovative and more sustainable solutions across a product's life cycle—from design and manufacturing to product use and end of life.
CommScope is committed to demonstrating a high standard of global product compliance practices. Through this commitment, we actively monitor global environmental trends and emerging regulatory requirements that may affect our products, operations, supply chain, and customer base. We are committed to be compliant with all applicable environmental product-related legal and other requirements. To achieve this, we have a global organization comprising environmental specialists, engineers, and product compliance experts who are constantly ensuring our compliance status is maintained. We manage our compliance using a cross-functional approach with our engineers, designers, quality organization, supply chain organization, and production.

CommScope is committed to upholding the human rights of its employees. To ensure our employees are treated with dignity and respect, we follow a well-established Code of Ethics and Business Conduct and Labor Policy that aligns with recognized standards and guidelines from the International Labor Organization, the United Nations Global Compact, the UN Universal Declaration of Human Rights, SA8000 and applicable laws.

Environmental and Health During Installation

There is no harmful emissive potential. No damage to health or impairment is expected under normal use corresponding to the intended use of the product.

Extraordinary Effects

Fire
Cable complies with applicable Plenum Communications Cable fire safety standards.

Water
None
Mechanical Destruction
None

Delayed Emissions

Global warming potential is calculated using the TRACI 2.1 and CML 4.1 impact assessment methodologies. Delayed emissions are not considered.

Environmental Activities and Certifications

Our Sustainability Report details CommScope's efforts to operate the business ethically and with integrity; protect the environment; maintain the health, safety and well-being of our workforce; and support the communities in which we operate. To learn more, view our comprehensive Sustainability Report at https://www.commscope.com/corporate-responsibility-and-sustainability/.

Further Information

CommScope, Inc.
1100 CommScope Place Southeast
Hickory, NC 28602

References

- PCR Part A — The Norwegian EPD Foundation: NPCR Part A: Construction Products and Services, v2.0, March 2021.
- PCR Part B — The Norwegian EPD Foundation: NPCR 027 Part B: Electrical Cables and Wires, v1.0, October 2020.
- Secondary PCR Part A — PEP ecopassport Program: Product Category Rules for Electrical, Electronic and HVAC-R Products, v3.0, April 2015.
- Secondary PCR Part B — PEP ecopassport Program: Product Specific Rules for Wores, Cables and Accessories, v3.0, October 2015.
- SimaPro v9.1 — PRe Sustainability. SimaPro Life Cycle Assessment version 9.1 (software).
- ISO 14025 — ISO 14025:2011-10, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.
- ISO 14040 — ISO 14040:2009-11, Environmental management — Life cycle assessment — Principles and framework.
- ISO 14044 — ISO 14044:2006-10, Environmental management — Life cycle assessment — Requirements and guidelines.
- EN 15804 — EN 15804:2012-04: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction product
- ASTM 2020 — ASTM International General Program Instructions v8.0, April 29, 2020.
- UL 2818 — GREENGUARD Certification Program for Chemical Emissions for Building Materials, Finishes and Furnishings
- ISO 21930: 2017 — ISO 21930:2017, Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services.
- Characterization Method — IPCC. 2014. Climate Change 2013. The Physical Science Basis. Cambridge University Press. (http://www.ipcc.ch/report/ar5/wg1/).
- Characterization Method — Hauschild M.Z., & Wenzel H. Environmental Assessment of Products. Springer, US, Vol. 2, 1998.
- Characterization Method — Heijungs R., Guinée J.B., Huppes G., Lankreijer R.M., Udo de Haes H.A., Wegener Sleeswijk A. Environmental Life Cycle Assessment of Products: Guide and Backgrounds. CML. Leiden University, Leiden,
- Characterization Method — Jenkin M.E., & Hayman G.D. Photochemical ozone creation potentials for oxygenated volatile organic compounds: sensitivity to variations in kinetic and mechanistic parameters. Atmospheric Environment. 1999, 33 (8) pp. 1275-1293.
- Characterization Method — WMO. 1999. Scientific Assessment of Ozone Depletion: 1998, World Meteorological Organization Global Ozone Research and Monitoring Project - Report No. 44, WMO, Geneva.
- Characterization Method — Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers- version 1.2, January 2017.

Contact Information

Study Commissioner

For more information, please visit
http://www.commscope.com, or contact Technical Support
at http://commscope.com/contact-us/contact-commscope
or 1-800-830-5056.

LCA Practitioner

Sustainable Solutions Corporation
155 Railroad Plaza, Suite 203
Royersford, PA 19468 USA
(+1) 610 569-1047
info@sustainablesolutionscorporation.com
www.sustainablesolutionscorporation.com