ENVIRONMENTAL PRODUCT DECLARATION

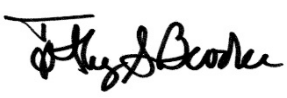
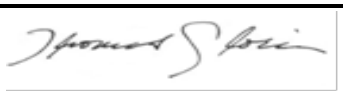
CommScope® Cable Runway & accessories

At CommScope, we believe that corporate responsibility and sustainability means making decisions that have a positive long-term impact on our people, planet, and bottom line. Our company-wide sustainability mission is to enable faster, smarter, and more sustainable solutions while demonstrating the utmost respect for our human and natural resources. Innovative technology, intelligent engineering, and energy efficient design help us accomplish our mission and achieve our goals.

Sustainability is a central part of the solutions and practices we create to serve the ever-increasing need for connectivity, and for us, sustainability starts at home with our own people and products. Through responsible business practices, partnerships and technology innovation, we are advancing our industry while creating a more sustainable future.

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025, EN 15804 + A2. 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	General Program Instructions. Version 8.0. April 29, 2020
Manufacturer Name and Address	CommScope, Inc. 3642 E US Highway 70, Claremont, North Carolina 28610
Declaration Number	EPD 1121
Declared Product & Functional Unit or Declared Unit	CommScope® Cable Runway & accessories Functional Unit = Support 11 kg wire along 1 meter for a reference service life of 20 years. The cable ladder system, capable of supporting a load of kg per meter on a span of 2 m, includes the profile and cable management and support components typical of standard use.
Reference PCR and Version Number	PEP ecopassport Program: PSR Specific Rules For Cable Management Solutions (PSR-0003-ed2-EN-2023 06 06)
Description of Product Application/Use	CommScope® cable management - Cable Runway & accessories
Product RSL Description (if Appl.)	20 Years
Markets of Applicability	Global
Date of Issue	February 13, 2026
Period of Validity	5 Years
EPD Type	Product Specific
Range of Dataset Variability	N/A
EPD Scope	Cradle-to-Grave
Year(s) of Reported Primary Data	2024
LCA Software Database(s) & Version Number	SimaPro 10.2.0.3 & ecoinvent 3.11 & USLCI+
LCIA Methodology & Version Number	TRACI 2.2, CML- IA Baseline 3.11 and EN15804+A2 (adapted) 1.03

The sub-category PCR review was conducted by:	
This declaration was independently verified in accordance with ISO 14025: 2006. The "PEP ecopassport Program PCR for electrical, electronic and HVAC-R products", v4.0, 2021 based on EN 15804:2012 + A2:2019, serves as the core PCR. ☐ INTERNAL ☒EXTERNAL	Timothy S Brooke ASTM International
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	
This life cycle assessment was independently verified in accordance with ISO 14044 and 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 EN 15804:2012+A2:2019 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.

ASTM INTERNATIONAL

General Information

Description of Company/Organization

CommScope (NASDAQ: COMM) helps design, build and manage wired and wireless networks around the world. Corporate responsibility and sustainability drive us to make decisions that benefit people, society, the planet and our bottom line. We enable faster, smarter and more sustainable solutions while respecting human and natural resources. Innovative technology, intelligent engineering and energy-efficient design help us meet our goals. CommScope builds sustainable networks that make our customers more agile, simultaneously helping to preserve the natural ecosystems from which we source components and materials.

Product Description

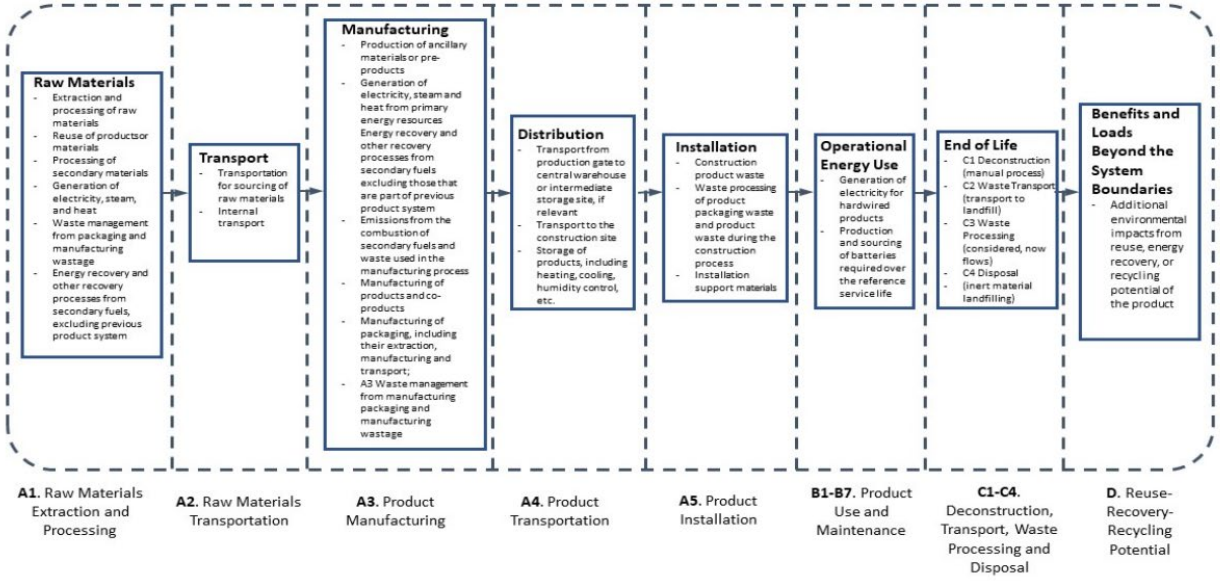
Cable runways are open on the top, bottom, and sides to allow cables to enter and exit easily. They provide an open framework that can be attached to walls, ceilings, floors, or the tops of racks and cabinets.

Product Type: Cable runway systems are cable management products

Product Characteristic: To secure and protect your infrastructure cables, CommScope offers high-quality cable runway solutions. Our modular components and mounting accessories come in a variety of lengths and widths, enabling you to create a design that caters to your specific needs. Made with steel, these rugged components bolt together to form a solid and reliable raceway but can be interchanged easily to accommodate redesigns as your layout changes.

This EPD covers 33 specific product IDs in the CommScope Cable Runways & accessories product series.

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 CommScope contract manufacture LYNAM INDUSTRIES INC. An impact assessment was completed for the CommScope Cable Runways & accessories products. This EPD covers one product series consisting of 33 product IDs. An impact assessment was completed for the product with the maximum weight of each functional components that were selected from Cable Runway and accessories product system in the series and the product with the weight in normalized meters is reported. Other product IDs in each functional component are represented through the TRACI product result table and can be independently calculated.

Application

Cable runways are open on the top, bottom, and sides to allow cables to enter and exit easily. They provide an open framework that can be attached to walls, ceilings, floors, or the tops of racks and cabinets.

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 product with the maximum weight of each functional components were listed below for the reference Cable Runway product system.

Functional component	Product ID	Description
Straight length section	760085621	Cable Runway, 6 ft (1829 mm) L x 24 in (610 mm) W, black
90° angle with plane change	760086090	Cable Runway, 90° radius outside corner bend, 18 in (457 mm) W, black
90° angle in the plane	760085555	Cable Runway, 90° radius flat corner bend, 24 in (610 mm) W, black
Junction	760084129	Cable Runway Adjustable Butt Splice Kit, Black
Earthing terminal	760084020	Cable Runway, foot kit, black
Cantilever bracket	760084160	Cable Runway, wall angle support kit, 12 in (305 mm), 24 in (610 mm) wall rail support kit, black

The composition of the reference CommScope Cable Runway system is as follows:

Material Type	Straight Length Section (kg/m)	90° angle with plane change (kg/m)	90° angle in the plane (kg/m)	Junction (kg/m)	Earthing terminal (kg/m)	Bracket (kg/m)
Unalloyed steel	4.03E+00	7.52E-02	7.11E-01	1.21E-02	1.46E-01	1.40E+00
Carbon Steel	0.00E+00	0.00E+00	0.00E+00	3.68E-01	0.00E+00	0.00E+00
Polyester Resin	1.27E-01	2.38E-03	2.25E-02	2.43E-02	0.00E+00	4.43E-02
Polyethylene	8.48E-02	1.58E-03	1.50E-02	0.00E+00	0.00E+00	2.95E-02
Total weight	4.24E+00	7.92E-02	7.49E-01	4.04E-01	1.46E-01	1.47E+00

Properties of Declared Product as Shipped

CommScope Cable Runways & accessories 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 Installation of 1 meter to support 11 kg wire along 1 meter.

Functions to be fulfilled	Number of functions	Total normalized to installed
Length (m)	100	1.03 m
Length scrap rate (3%)	3	
90° angle with plane change	4	0.04
90° angle in the plane	16	0.16
Junction	33	0.33
Earthing terminal (for a metal trunking and if imposed by national regulations)	10	0.1
Bracket (including assembly elements to fix the length to the bracket)	50	0.5

Name	Value	Unit
Declared Unit	1 meter of installed product	
Maximum Mass (System Normalization to 1 m)	7.10	kg

System Boundary

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

Life Cycle Stage	Life Cycle Module	Module	Included (X)/ Not Included
Product Stage	Raw Material Supply	A1	X
	Transport	A2	X
	Manufacturing	A3	X
Construction Process Stage	Transport from gate to the site	A4	X
	Construction/Installation process	A5	X
Use Stage	Use	B1	X
	Maintenance	B2	X
	Repair	B3	X
	Replacement	B4	X

	Refurbishment	B5	X
	Operational energy use	B6	X
	Operational water use	B7	X
End of Life Stage*	Deconstruction/ demolition	C1	X
	Transport	C2	X
	Waste processing	C3	X
	Disposal	C4	X
Benefits and Loads Beyond the System Boundaries	Reuse-Recovery-Recycling potential	D	X

*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.

Notes:

· There are no activities in the Modules B1-B7, C1 and C3 as the values are “0”

· Module D is reported but excluded from the total life cycle results as it falls outside the system boundary

Reference Service Life

The reference service life of the Cable Runway system is 20 years.

Allocation

Allocation was determined on a per meter basis for the system.

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 3.11 & USLCI+ databases 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 2024.

Treatment of Biogenic Carbon

The uptake and release of biogenic carbon throughout the product life cycle follows EN15804+A2 Section 6.4.4.

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 + A2 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

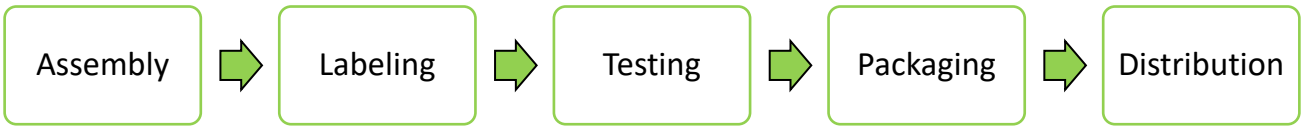
For life cycle modeling of the considered products, SimaPro- LCA software tool, developed by PRé-Sustainability, is used. The ecoinvent database contains consistent and documented datasets which are available online. To ensure comparability of results in the LCA, data from the ecoinvent database were used for materials, energy, transportation, and waste treatment.

Manufacturing

CommScope’s Cable runway and accessories are produced with metal components, paper labels and other joining and mounting hardware.

Sheet metal is laser cut and then processed through Turrets and Press brakes for punching and bending operations. Then they are tapped and finally powder coated. The metal components are then assembled with mounting hardware where necessary, and additional hardware is kitted and provided along with the components for mounting at customer end. The kit is finally checked and then packaged in plastic wrap and

then in carboards to be finally packed on pallets. Once packaged, Racks are shipped to customers.



Packaging

The packaging for this product series is composed of three types of packaging materials: plastics, paper and cardboard. which is used for individual product packaging. Biogenic carbon content of packaging is -7.89E-02 kg CO2 as reported in the EN15804+A2 Resource Use table.

Quantity % by Weight	
Material	**Maximum**
Plastics	41.38%
Paper	0.78%
Cardboard	57.84%
Total	100.00%

Transformation

Transport to Building Site (A4)		
Name	**Value**	**Unit**
Fuel type	Diesel, compliant with EURO5	
Transport mode	100% by truck	
Transport distance (to distribution center)	402.5	km
Transport distance (to end customers)	1,932	km
Capacity Utilization	85	%
Weight of 1 meter of installed product with packaging transported	8.139	kg

Product Installation

CommScope Cable runway & accessories 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. According to PSR Specific Rules For Cable Management Solutions, 1.03 m

of profiles taken into account to install 1 m of linear trunking function, 3% scrap rate need to be considered. The product is designed for manual installation therefore no power equipment is used so electricity usage can be neglected.

Installation into the building (A5)		
Name	**Max**	**Unit**
Auxiliary materials	-	kg
Water consumption	-	m^3
Other resources	-	kg
Electricity consumption	-	kWh
Other energy carriers	-	MJ
Product loss per functional unit	2.13E-01	kg
Waste materials at construction site	2.13E-01	kg
Output substance (recycle)	0.00E+00	kg
Output substance (landfill)	0.00E+00	kg
Output substance (incineration)	0.00E+00	kg
Packaging waste (recycle)	0.00E+00	kg
Packaging waste (Landfill)	0.00E+00	kg
Packaging waste (incineration)	0.00E+00	kg
Packaging waste (Incineration with no energy recovery)	9.57E-01	kg
Direct emissions to ambient air*, soil, and water	1.23E+00	kg CO_2
VOC emissions	-	kg

*CO2 emissions to air from disposal of packaging

Reference Service Life		
Name	**Value**	**Unit**
Reference Service Life	20	years
Declared product properties (at the gate) and finishes, etc.	-	
Design application parameters (if instructed by the manufacturer), including the references to the appropriate practices and application codes	-	
An assumed quality of work, when installed in accordance with the manufacturer's instructions	-	
Outdoor environment, (for outdoor applications), e.g. weathering, pollutants, UV and wind exposure, building orientation, shading, temperature	-	
Indoor environment (for indoor applications), e.g. temperature, moisture, chemical exposure	-	
Usage conditions, e.g. frequency of use, mechanical exposure	-	
Maintenance e.g. required frequency, type and quality and replacement of components	-	

Product Use

No cleaning, maintenance, repair, replacement or refurbishment is required. There is no operational energy or water use.

Operational Energy Use (B6)		
Name	**Value**	**Unit**
Ancillary materials specified by material	-	kg
Net freshwater consumption	-	m^3
Electricity consumption	-	kWh
Power output of equipment	-	kWh
Characteristic performance	-	-
Further assumptions for scenario development	-	-

Disposal

The product can be manually disassembled for disposal. According to the PSR Specific Rules For Cable Management Solutions, the disposal of the product should follow the scenario of 100% incineration with no energy recovery.

End of Life (C2-C4)		
Name	**Max**	**Unit**
Collected separately	0.00E+00	kg
Collected as mixed construction waste	7.09E+00	kg
Reuse	0.00E+00	kg
Recycling	0.00E+00	kg
Landfilling (metal)	6.74E+00	kg
100% Incineration with no energy recovery (plastics)	3.51E-01	kg
Energy conversion	25.00	%
Removals of biogenic carbon	-	kg

Re-use Phase

Re-use of the product is not common.

Re-Use, recovery, And/Or Recycling Potential (D)		
Name	**Max**	**Unit**
Net energy benefit from energy recovery from waste treatment declared as exported energy in C3 (R>0.6)	0.00	MJ
Net energy benefit from thermal energy due to treatment of waste declared as exported energy in C4 (R<0.6)	0.00	MJ
Net energy benefit from material flow declared in C3 for energy recovery	0.07	MJ
Process and conversion efficiencies	-	
Further assumptions for scenario development (e.g. further processing technologies, assumptions on correction factors);	-	

LCA Results - Maximum Impact

Results shown below were calculated using the TRACI 2.2 Methodology. The results for TRACI, CML, and EN15804+A2 results are shown below for the cable runway system with the maximum weight product selected from each functional component. For all methodologies below, module D is not included in the Total, as it is outside the product system boundary.

Results shown below were calculated using the TRACI 2.2 Methodology.

TRACI 2.2 - Impact Assessment

Impact Category	Unit	A1-A3	A4	A5	C2	C4	D	Total
Global warming potential	kg CO2 eq	2.26E+01	1.88E+00	1.70E+00	7.01E-02	4.86E-01	-9.74E+00	2.67E+01
Ozone depletion	kg CFC-11 eq	8.38E-08	3.01E-09	1.57E-09	1.12E-10	2.48E-10	-3.52E-08	8.87E-08
Acidification	kg SO2 eq	7.69E-02	7.88E-03	7.46E-03	2.94E-04	7.62E-03	-3.16E-02	1.00E-01
Marine eutrophication	kg N eq	8.07E-03	2.21E-03	1.45E-03	8.24E-05	1.75E-03	-4.17E-03	1.36E-02
Freshwater eutrophication	kg P eq	2.10E-03	1.22E-07	2.09E-05	4.55E-09	4.50E-07	-1.78E-03	2.12E-03
Smog	kg O3 eq	1.11E+00	2.72E-01	1.89E-01	1.02E-02	2.11E-01	-4.82E-01	1.79E+00

**Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

Results shown below were calculated using the CML-IA baseline V3.11 / EU25 methodology

CML-IA baseline - Impact Assessment

Impact Category	Unit	A1-A3	A4	A5	C2	C4	D	Total
Global warming (GWP100a)	kg CO2 eq	2.27E+01	1.88E+00	1.73E+00	7.01E-02	4.88E-01	-9.80E+00	2.69E+01
Abiotic depletion	kg Sb eq	1.23E-05	3.59E-09	1.27E-07	1.34E-10	1.24E-08	-8.11E-06	1.24E-05
Abiotic depletion (fossil fuels)	MJ	1.68E+02	3.47E-01	2.21E+00	1.29E-02	2.05E-01	-9.45E+01	1.71E+02
Photochemical oxidation	kg C2H4 eq	1.48E-02	1.01E-04	2.60E-03	3.76E-06	4.16E-04	-4.24E-03	1.79E-02
Acidification	kg SO2 eq	7.15E-02	5.43E-03	5.08E-03	2.03E-04	4.26E-03	-2.94E-02	8.65E-02
Eutrophication	kg PO4--- eq	1.82E-02	1.40E-03	1.76E-03	5.22E-05	1.10E-03	-1.47E-02	2.25E-02
Ozone layer depletion (ODP)	kg CFC-11 eq	6.88E-08	1.66E-09	1.25E-09	6.20E-11	1.87E-10	-2.92E-08	7.20E-08

**Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

Results shown below were calculated using EN 15804 + A2 (adapted) V1.03 Methodology.

EN 15804 + A2 (adapted) - Impact Assessment

Parameter - EN 15804 + A2	Unit	A1-A3	A4	A5	C2	C4	D	Total
Acidification	mol H+ eq	9.10E-02	8.44E-03	7.05E-03	3.15E-04	6.28E-03	-3.69E-02	1.13E-01

Climate change	kg CO2 eq	2.20E+01	1.87E+00	3.08E+00	6.99E-02	4.90E-01	-9.80E+00	2.75E+01
Climate change - Biogenic	kg CO2 eq	-1.45E+00	5.38E-03	1.45E+00	2.01E-04	4.56E-06	0.00E+00	5.58E-03
Climate change - Fossil	kg CO2 eq	2.27E+01	1.88E+00	1.63E+00	7.01E-02	4.90E-01	-9.83E+00	2.68E+01
Climate change - Land use and LU change	kg CO2 eq	7.01E-03	0.00E+00	9.59E-05	0.00E+00	4.80E-06	-3.82E-03	7.11E-03
Ecotoxicity, freshwater	CTUe	1.19E+02	7.51E+00	2.49E+01	2.81E-01	5.50E+00	-3.07E+01	1.57E+02
Ecotoxicity, freshwater - inorganics	CTUe	1.06E+02	7.44E+00	2.43E+01	2.78E-01	5.45E+00	-2.80E+01	1.43E+02
Ecotoxicity, freshwater - organics	CTUe	1.27E+01	7.01E-02	5.76E-01	2.62E-03	5.12E-02	-2.71E+00	1.34E+01
Particulate matter	disease inc.	1.37E-06	3.83E-08	2.29E-08	1.43E-09	7.99E-09	-9.17E-07	1.44E-06
Eutrophication, marine	kg N eq	1.12E-02	4.14E-03	2.62E-03	1.55E-04	3.28E-03	-7.00E-03	2.14E-02
Eutrophication, freshwater	kg P eq	3.76E-03	1.81E-07	2.47E-05	6.77E-09	7.39E-07	-3.37E-03	3.79E-03
Eutrophication, terrestrial	mol N eq	1.83E-01	4.54E-02	3.02E-02	1.69E-03	3.59E-02	-8.80E-02	2.96E-01
Human toxicity, cancer	CTUh	2.62E-08	5.94E-10	1.84E-08	2.22E-11	3.80E-09	-1.28E-08	4.90E-08
Human toxicity, cancer - inorganics	CTUh	6.69E-09	4.47E-10	1.63E-08	1.67E-11	1.01E-10	-1.67E-09	2.36E-08
Human toxicity, cancer - organics	CTUh	1.95E-08	1.47E-10	2.02E-09	5.48E-12	3.70E-09	-1.12E-08	2.54E-08
Human toxicity, non-cancer	CTUh	1.07E-06	9.38E-08	1.95E-06	3.50E-09	1.47E-08	-4.62E-08	3.14E-06
Human toxicity, non-cancer - inorganics	CTUh	1.05E-06	9.23E-08	1.95E-06	3.45E-09	1.47E-08	-4.43E-08	3.11E-06
Human toxicity, non-cancer - organics	CTUh	1.27E-08	1.57E-09	7.79E-10	5.88E-11	7.70E-11	-1.87E-09	1.52E-08
Ionising radiation	kBq U-235 eq	9.61E+07	9.01E+06	3.18E+06	3.36E+05	1.24E-04	-8.32E+05	1.09E+08
Land use	Pt	8.58E+01	1.64E-01	1.88E+00	6.14E-03	4.06E-01	-2.37E+01	8.83E+01
Ozone depletion	kg CFC11 eq	7.88E-08	1.70E-09	1.48E-09	6.35E-11	2.35E-10	-3.16E-08	8.23E-08
Photochemical ozone formation	kg NMVOC eq	6.63E-02	1.13E-02	1.03E-02	4.20E-04	9.16E-03	-2.99E-02	9.75E-02
Resource use, fossils	MJ	1.83E+02	3.47E-01	2.61E+00	1.29E-02	2.07E-01	-9.72E+01	1.86E+02
Resource use, minerals and metals	kg Sb eq	1.23E-05	3.59E-09	1.27E-07	1.34E-10	1.24E-08	-8.10E-06	1.24E-05
Water use	m3 depriv.	-2.73E-01	4.71E-02	-6.41E-02	1.76E-03	9.01E-03	-1.93E+00	-2.79E-01

***The Potential Human Exposure Efficiency Relative to U235 (IRP) is the same as the Ionising Radiation category*

***The Abiotic depletion potential for non-fossil resources (ADP minerals & metals) is the same as Resource use, minerals and metals*

***The Abiotic depletion potential for fossil resources (ADP fossils) is the same as Resource use, fossils*

** Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

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

EN 15804 + A2 (adapted): Resource Use - Impact Assessment

Impact Category	Unit	A1-A3	A4	A5	C2	C4	D	Total
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	1.48E+01	7.51E-05	3.48E-01	2.80E-06	1.93E-03	-3.22E+00	1.52E+01
Use of renewable primary energy resources used as raw materials	MJ	2.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E+01
Total use of renewable primary energy resources	MJ	3.92E+01	7.51E-05	3.48E-01	2.80E-06	1.93E-03	-3.22E+00	3.96E+01
Use of non-renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	1.94E+02	3.74E-01	2.75E+00	1.40E-02	2.20E-01	-1.03E+02	1.97E+02
Use of non-renewable primary energy resources used as raw materials	MJ	1.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+01
Total use of non-renewable primary energy resources	MJ	2.05E+02	3.74E-01	2.75E+00	1.40E-02	2.20E-01	-1.03E+02	2.08E+02
Use of secondary material	kg	2.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-03
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
Use of non-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
Net use of fresh water	m3	-2.51E-01	4.72E-02	-6.42E-02	1.76E-03	9.01E-03	-1.95E+00	-2.57E-01

**Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

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

EN 15804 + A2 (adapted): Waste and output flows - Impact Assessment

Impact Category	Unit	A1-A3	A4	A5	C2	C4	D	Total
Hazardous waste disposed	kg	9.59E-04	0.00E+00	2.10E-06	0.00E+00	1.32E-06	-8.91E-04	9.62E-04
Non-hazardous waste disposed	kg	7.25E-01	2.85E-08	4.47E-02	1.06E-09	1.35E+00	-5.83E-01	2.12E+00
Radioactive waste disposed	kg	5.64E-05	0.00E+00	7.37E-07	0.00E+00	3.02E-08	-3.18E-05	5.72E-05
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
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-01	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E+00	0.00E+00

**Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

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

EN 15804 + A2 (adapted): Greenhouse gas emissions and removals - Impact Assessment								
Impact Category	Units	A1 - A3	A4	A5	C2	C4	D	Total
Biogenic Carbon Removal from Product	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Emissions from Product	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic Carbon Removal from Packaging	kg CO2	7.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.85E-01
Biogenic Carbon Emissions from Packaging	kg CO2	0.00E+00	0.00E+00	7.85E-01	0.00E+00	0.00E+00	0.00E+00	7.85E-01
Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Calcination Carbon Emissions	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbonation Carbon Removal	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

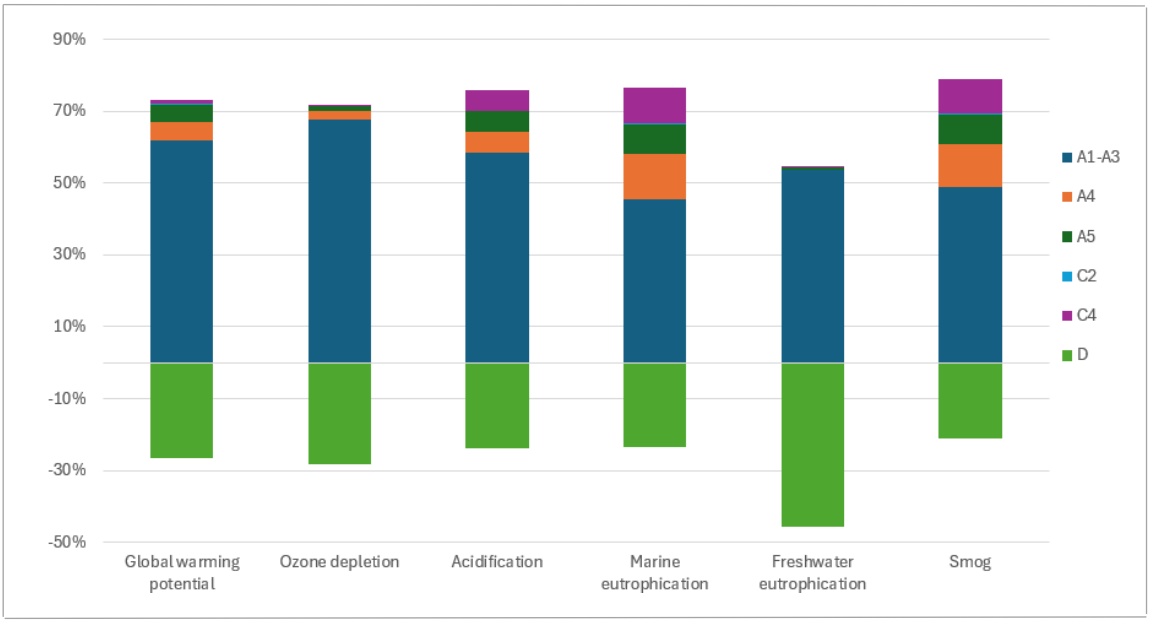
**Stages B1 through B7, C1 and C3 have not been considered and reported as they are not applicable in this LCA study*

LCA Interpretation – Maximum Impact

The production life cycle stage (A1-A3) dominates the impacts across all impact categories. This is due to the upstream production of materials used in the product, along with the electricity use in the manufacturing of the product. Significant impact is also shown by the A4 distribution stage and A5 installation stage in most of the impact categories. The reuse, recovery, and recycling potential (D) stage is a negative value and accounts for the benefit of energy recovery during incineration, and the benefit from recycling material at the end-of-life for a product.

These results underscore that efforts to reduce the overall environmental impacts of this product should focus primarily on improvements in the early product stages (A1-A3), particularly in sourcing and processing raw materials.

Below figure shows the TRACI 2.2 impacts of the cable runway system with the maximum weight product selected from each functional component.



Product Results Tables

Full impact results in TRACI, CML and EN15804 + A2 are reported above on the maximum weight product. Since there are multiple products in this Cable runway system product series covered in this EPD. Tables below show the TRACI results for the product IDs in each functional component of the cable runway system. The maximum weight product is in the end of each table. The total result includes the GWP value of A1-A3 plus the stages A4, A5, C2, C4. Module D is not included in the Total result, as it is outside the product system boundary. This approach ensures consistent and transparent calculation of environmental impacts across all products in the group.

TRACI results for the products of the straight length section (per meter)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760085605	1.06E+01	4.19E-08	3.63E-02	4.51E-03	1.18E-03	5.32E-01
760085613	1.23E+01	4.64E-08	4.25E-02	5.23E-03	1.37E-03	6.20E-01
760085662	1.33E+01	4.39E-08	4.57E-02	5.56E-03	1.51E-03	6.65E-01
760085647	1.01E+01	3.52E-08	3.46E-02	4.24E-03	1.14E-03	5.05E-01
760085654	1.17E+01	3.96E-08	4.01E-02	4.90E-03	1.32E-03	5.85E-01
760085621	1.39E+01	5.08E-08	4.75E-02	5.86E-03	1.56E-03	6.95E-01

Product ID	A4	A5	C2	C4	D	Total
760085605	8.20E-01	7.71E-01	3.00E-02	2.12E-01	-4.29E+00	1.24E+01
760085613	9.43E-01	8.07E-01	3.53E-02	2.49E-01	-5.05E+00	1.43E+01
760085662	1.02E+00	5.97E-01	4.04E-02	2.85E-01	-5.78E+00	1.52E+01
760085647	7.73E-01	5.35E-01	3.01E-02	2.12E-01	-4.30E+00	1.17E+01
760085654	8.94E-01	5.66E-01	3.53E-02	2.48E-01	-5.04E+00	1.34E+01
760085621	1.07E+00	8.35E-01	4.07E-02	2.87E-01	-5.81E+00	1.61E+01

TRACI results for the products of the 90° angle with plane change section (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760085688	7.23E+00	4.40E-08	2.49E-02	3.33E-03	7.66E-04	3.73E-01
760085696	8.25E+00	4.69E-08	2.84E-02	3.75E-03	8.93E-04	4.24E-01
760086090	8.51E+00	4.73E-08	2.88E-02	3.83E-03	8.93E-04	4.35E-01

Product ID	A4	A5	C2	C4	D	Total
760085688	5.90E-01	1.18E+00	1.60E-02	1.13E-01	-2.29E+00	9.13E+00
760085696	6.73E-01	1.20E+00	1.96E-02	1.38E-01	-2.79E+00	1.03E+01
760086090	6.73E-01	1.20E+00	1.96E-02	1.38E-01	-2.79E+00	1.05E+01

TRACI results for the products of the 90° angle in the plane section (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760085530	1.13E+01	5.51E-08	3.88E-02	4.99E-03	1.24E-03	5.75E-01
760085548	1.39E+01	6.21E-08	4.77E-02	6.06E-03	1.54E-03	7.04E-01
760085555	1.66E+01	6.93E-08	5.69E-02	7.14E-03	1.84E-03	8.36E-01

Product ID	A4	A5	C2	C4	D	Total
760085530	8.99E-01	1.26E+00	2.92E-02	2.06E-01	-4.18E+00	1.37E+01
760085548	1.10E+00	1.31E+00	3.77E-02	2.66E-01	-5.39E+00	1.66E+01
760085555	1.30E+00	1.36E+00	4.62E-02	3.26E-01	-6.60E+00	1.96E+01

TRACI results for the products of the Junction section (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760084046	2.74E+00	6.86E-09	9.24E-03	2.20E-04	7.18E-05	1.19E-01
760084129	3.41E+00	1.50E-08	1.13E-02	4.67E-04	1.17E-04	1.54E-01

Product ID	A4	A5	C2	C4	D	Total
760084046	2.73E-01	1.65E-01	1.10E-02	8.26E-02	-8.22E-01	3.27E+00
760084129	3.54E-01	4.91E-01	1.21E-02	9.12E-02	-8.99E-01	4.36E+00

TRACI results for the products of the earthing terminal section (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760084012	4.51E-01	5.79E-09	1.35E-03	2.36E-04	3.12E-05	2.57E-02
760084020	5.36E+00	2.41E-08	1.82E-02	1.82E-02	5.84E-04	2.70E-01

Product ID	A4	A5	C2	C4	D	Total
760084012	4.44E-02	2.34E-01	2.30E-04	3.70E-02	-2.44E-02	7.67E-01
760084020	4.23E-01	5.92E-01	1.44E-02	1.79E-03	-2.11E+00	6.39E+00

TRACI results for the products of the cantilever bracket section (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760083907	7.68E-01	4.24E-09	2.57E-03	3.38E-04	8.37E-05	3.96E-02
760083915	8.64E-01	4.85E-09	2.89E-03	3.80E-04	9.26E-05	4.44E-02
760083923	5.31E-01	2.96E-09	1.78E-03	2.34E-04	5.70E-05	2.73E-02
760084145	6.19E+00	2.33E-08	2.10E-02	2.59E-03	6.85E-04	3.11E-01
760084137	1.76E+00	9.51E-09	5.97E-03	7.61E-04	1.70E-04	9.02E-02
760084111	3.68E+00	1.83E-08	1.24E-02	1.59E-03	4.00E-04	1.88E-01
760084095	6.14E+00	2.27E-08	2.09E-02	2.57E-03	6.77E-04	3.08E-01

760084103	9.08E+00	3.32E-08	3.09E-02	3.79E-03	9.90E-04	4.56E-01
760084160	9.93E+00	3.68E-08	3.37E-02	4.16E-03	1.11E-03	4.99E-01

Product ID	A4	A5	C2	C4	D	Total
760083907	6.28E-02	1.18E-01	1.92E-03	2.62E-02	-2.67E-01	9.77E-01
760083915	7.09E-02	1.40E-01	2.12E-03	1.49E-02	-3.03E-01	1.09E+00
760083923	4.36E-02	8.48E-02	1.31E-03	9.23E-03	-1.90E-01	6.70E-01
760084145	4.76E-01	4.49E-01	1.79E-02	1.26E-01	-2.56E+00	7.26E+00
760084137	1.32E-01	2.82E-01	3.82E-03	2.69E-02	-5.45E-01	2.21E+00
760084111	2.96E-01	4.82E-01	9.62E-03	6.78E-02	-1.37E+00	4.54E+00
760084095	4.69E-01	4.27E-01	1.78E-02	1.26E-01	-2.54E+00	7.18E+00
760084103	6.86E-01	6.27E-01	2.60E-02	1.83E-01	-3.70E+00	1.06E+01
760084160	7.66E-01	6.85E-01	2.91E-02	2.05E-01	-4.16E+00	1.16E+01

TRACI results for the products of the other supporting kits (per piece)

A1 - A3						
Product ID	Global warming potential	Ozone depletion	Acidification	Marine eutrophication	Freshwater eutrophication	Smog
760083931	7.55E+00	3.72E-08	2.54E-02	3.26E-03	8.22E-04	3.84E-01
760083949	4.58E+00	2.01E-08	1.55E-02	1.96E-03	5.02E-04	2.32E-01
760083956	9.99E+00	4.37E-08	3.37E-02	4.25E-03	1.10E-03	5.05E-01
760083964	1.59E+01	7.64E-08	5.35E-02	6.83E-03	1.73E-03	8.07E-01
760083972	1.57E+00	1.17E-08	5.10E-03	3.80E-04	7.05E-05	7.61E-02
760084038	4.43E-01	3.19E-09	1.46E-03	2.02E-04	4.53E-05	2.31E-02
760084053	4.56E+00	1.85E-08	1.52E-02	5.30E-04	1.36E-04	2.04E-01
760084079	4.74E+00	1.92E-08	1.61E-02	1.99E-03	5.26E-04	2.38E-01

Product ID	A4	A5	C2	C4	D	Total
760083931	6.00E-01	9.67E-01	1.99E-02	1.40E-01	-2.84E+00	9.28E+00
760083949	3.61E-01	4.68E-01	1.26E-02	8.89E-02	-1.80E+00	5.51E+00
760083956	7.89E-01	1.01E+00	2.77E-02	1.95E-01	-3.95E+00	1.20E+01
760083964	1.27E+00	1.94E+00	4.21E-02	2.97E-01	-6.40E+00	1.94E+01
760083972	1.66E-01	4.46E-01	4.03E-03	2.54E-02	-2.91E-01	2.21E+00
760084038	3.81E-02	1.07E-01	8.96E-04	1.11E-04	-1.31E-01	5.89E-01

760084053	4.78E-01	6.00E-01	1.68E-02	1.06E-01	-1.24E+00	5.76E+00
760084079	3.71E-01	4.16E-01	1.34E-02	1.66E-03	-1.97E+00	5.54E+00

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, 90% of CommScope manufacturing facilities are certified according to the ISO14001 and ISO45001 standards. Our vision and commitments 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 align 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
No extraordinary effects to the environment can be anticipated during exposure to fire.

Water
Contains no substances that have any impact on water in case of flood.

Mechanical Destruction
No danger to the environment can be anticipated during mechanical destruction.

Delayed Emissions

Global warming potential is calculated using the TRACI 2.2, CML- IA Baseline 3.11 and EN15804+A2 (adapted) 1.03 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/.

CommScope maintains a variety of certifications based on the widely accepted industry standards:

- Quality Management System certification (ISO9001/TL9000)
- Environmental Management System certification (ISO14001)
- Health and Safety Management System certification (ISO45001)

These certificates can be downloaded from our company website:

https://www.commscope.com/corporate-responsibility-and-sustainability/philosophy/#certifications

Product sustainability certifications including EPDs and Health Product Declarations (HPDs) can be downloaded from our company website:

https://www.commscope.com/corporate-responsibility-and-sustainability/product-sustainability/certifications/

Further Information

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References

- PCR — PEP ecopassport Program: Product Category Rules for Electrical, Electronic and HVAC-R Products, v4.0, 2021.
- PSR — PEP ecopassport Program Product Specific Rules specific for Cable Management Solutions, v5.0, 2023
- LCA tool & Databases — Simapro Craft version 10.2.0.3 of LCA software & ecoinvent 3.11, USLCI+ databases.
- 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 + A2 — EN 15804:2012+A2:2019/AC:2021 - Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products
- ASTM 2020 — ASTM International General Program Instructions v8.0, April 29, 2020
- Characterization Method — IPCC. 2021. Climate Change 2021. The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson, delmotte, V., et al] Cambridge University Press, Cambridge, UK and New York, NY, USA (http://www.ipcc.ch/report/ar6/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, visit our website at https://www.commscope.com/

- Contact customer support for product and technical questions at https://www.commscope.com/contact-us/
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