COMMSCOPE®

ENVIRONMENTAL PRODUCT DECLARATION

FiberGuide® Fiber Cable Management Raceways

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 640
Declared Product & Functional Unit or Declared Unit	CommScope FiberGuide® Fiber Cable Management Raceways Functional Unit = Support the wiring along 1 meter for a Reference Service Life of 20 years. The cable tray system, capable of supporting a load of 21.1 kg per meter on a span of 0.305 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 FiberGuide® Fiber Cable Management Raceways support and guide fiber optic cables for communications systems in commercial buildings
Product RSL Description (if Appl.)	20 Years
Markets of Applicability	Global
Date of Issue	March 21, 2024
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	2022
LCA Software Database(s) & Version Number	LCA for Experts v10.7
LCIA Methodology & Version Number	TRACI 2.1 ; CML 4.1

The 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
This life cycle assessment was conducted 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 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.

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

FiberGuide® Fiber Cable Management Raceway is to support and guide fiber optic cables for communications systems.

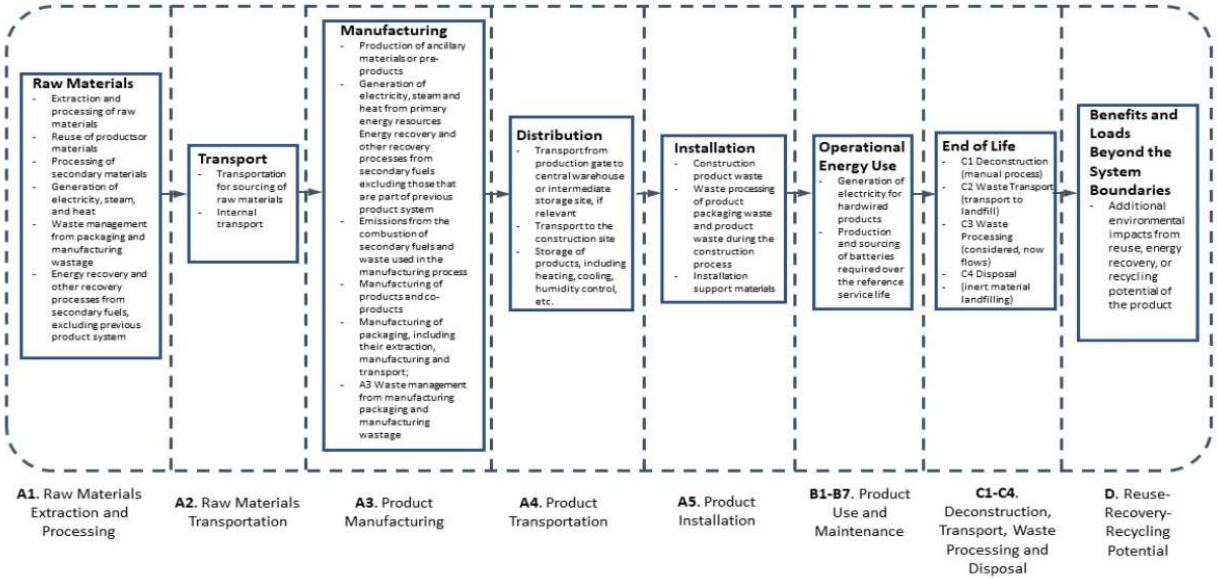
Product Type: Cable Tray System

Product Characteristic:

This EPD Covers specific parts in the CommScope FiberGuide® product family including:

- Yellow 12” System
- Black 12” System
- Yellow 6” System
- Black 6” System
- Yellow 4” System
- Black 4” System
- Yellow 2” System
- Black 2” System
- Yellow 2X6 2” System

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. An impact assessment was completed for the reference system and scaling factors calculated for other systems in the product family.

Application

The FiberGuide® Fiber Cable Management Raceway system is designed to protect and route fiber optic patch cords, multifiber cable assemblies and intra-facility fiber cable (IFC) to and from fiber splice enclosures, fiber distribution frames and fiber optic terminal devices.

Material Composition

Material Type	Straight Length Section (%)	90° angle with plane change (Down Elbow) (%)	90° angle in the plane (Horizontal Elbow) (%)	Junction (%)	Cantilever Bracket (%)
Thermoplastic	100.00	100.00	100.00	99.37	1.70
Steel	0.00	0.00	0.00	0.63	98.30

Placing on the Market / Application Rules

Flammability Rating - UL 2024, 5th Ed., Issue Date: 2014-03-25, Revision Date: 2021-11-17

Safety Rating - CAN/ULC S143, 2nd Ed., Issue Date: 2014-11-01

Specification for Flammability Testing of Materials - UL 94 V-0

Properties of Declared Product as Shipped

CommScope FiberGuide® Fiber Cable Management Raceways 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 wiring along 1 meter.

Name	Value	Unit
Declared Unit	1 meter of installed product	
Mass	3.99	kg
System Normalization to 1 m	-	-

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.

Reference Service Life

The reference service life of a properly installed CommScope FiberGuide® Fiber Cable Management Raceways 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 Sphera 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 2022.

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, the LCA for Experts Software System for Life Cycle Engineering, developed by Sphera, is used. The Sphera database contains consistent and documented datasets which are documented online. To ensure comparability of results in the LCA, the basic data of the Sphera database were used for energy, transportation, and auxiliary materials.

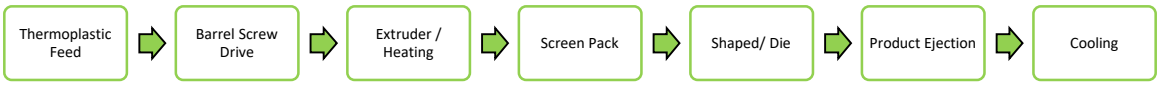
Manufacturing

The primary manufacturing processes occur in multiple locations. The FiberGuide® products manufacturing process is injection molding and plastic extrusion. In the injection molding process, thermoplastic pellets are fed to the injection molding press by a hopper. The pellets are heated to the desired temperature and injected into the mold which has been closed and clamped together. The mold is then cooled to solidify the product and the product is ejected. Various packaging options exist, but most product is bagged and boxed.

In the extrusion process, plastic pellets are also fed by a hopper to the extrusion machine. The thermoplastic pellets travel through a rotating screw conveying the pellets forward to a gradually heating barrel that approaches the extruder. The heated and melted thermoplastic then passes through a screen pack to prevent clogging and into the die to acquire the die shape. The product is then forced out of the die and immediately cooled as it is pulled away from the extruder. Various packaging options exist, but most product is bagged and boxed.

Molding Process

Extrusion Process



Packaging

All packaging is fully recyclable and is primarily cardboard and wood. Plastic materials are used for individual product packaging.

	Quantity (% by Weight)				
Packaging Type	**Straight Length Sectio (%)**	**90° angle with plane change (Down Elbow) (%)**	**90° angle in the plane (Horizontal Elbow) (%)**	**Junction (%)**	**Cantilever Bracket (%)**
Wood	20	56	56	6	5
Cardboard	79	44	44	73	10
Plastic	1	0	0	21	85
Total	100	100	100	100	100

Transformation

Truck Transport to Building Site (A4)		
Name	**All Products**	**Unit**
Fuel Type	Diesel	
Liters of Fuel	33.1	l/100 km
Vehicle Type	100% by Truck	
Average Transport Distance	1000	km
Capacity Utilization	85%	by mass
Gross density of Products Transported	75 - 1451	kg/m3
Weight of a single product system with packaging transported	12.37	kg
Weight of a single product system normalized to 1 m with packaging transported	4.65	kg

Product Installation

CommScope FiberGuide® Fiber Cable Management Raceways 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 3% in accordance with the PSR. The product is designed for manual installation therefore no power equipment is used so electricity usage can be neglected.

Installation Requirement into the building (A5)							
Name	**Unit**	**Straight Length Section**	**90° angle with plane change (Down Elbow)**	**90° angle in the plane (Horizontal Elbow)**	**Junction**	**Cantilever Bracket**	**Total**
Product Loss Per Functional Unit	kg	8.83E-02	1.25E-04	2.88E-03	5.29E-04	2.79E-02	1.20E-01
Waste Materials At The Construction Site	kg	8.83E-02	1.25E-04	2.88E-03	5.29E-04	2.79E-02	1.20E-01
Output Materials (Recycle)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output Materials (Landfill)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output Materials (incineration)	kg	8.83E-02	1.25E-04	2.88E-03	5.29E-04	2.79E-02	1.20E-01
Packaging Waste (Recycle)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Packaging Waste (Landfill)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Packaging Waste (Incineration)	kg	9.02E-01	1.42E-03	1.85E-02	2.71E-02	2.73E-01	1.22E+00
Direct emissions to ambient air, soil, and water	kg CO_2	4.65E-01	9.56E-01	6.37E-03	3.79E-03	1.09E-02	1.44E+00

Product Installation

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

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

Disposal

The product can be manually disassembled for disposal. The product is disposed through waste incineration with no energy recover per the PSR.

End of Life (C1 - C4)							
Disposal Requirement	**Unit**	**Straight Length Section**	**90° angle with plane change (Down Elbow)**	**90° angle in the plane (Horizontal Elbow)**	**Junction**	**Cantilever Bracket**	**Total**
Collected separately	kg	2.94E+00	4.15E-03	9.59E-02	1.76E-02	9.32E-01	3.99E+00
Collected as mixed construction waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landfilled	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Incineration with no energy recovery	kg	2.94E+00	4.15E-03	9.59E-02	1.76E-02	9.32E-01	3.99E+00
Incineration with energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy conversion	%	-	-	-	-	-	-
Removals of biogenic carbon	kg	-	-	-	-	-	-

Re-use Phase

Re-use of the product is not common.

LCA Results

Results shown below were calculated using the TRACI 2.1 Methodology

TRACI 2.1 Impact Assessment								
Parameter	**Parameter**	**Unit**	**A1 - A3**	**A4**	**A5**	**C2**	**C4**	**Total**
GWP	Global warming potential	kg CO_2-Eq.	1.73E+01	3.96E-01	2.15E+00	3.95E-01	1.26E+01	3.28E+01
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	2.29E-07	1.09E-15	6.86E-09	1.09E-15	2.80E-09	2.39E-07
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	4.19E-02	2.38E-03	2.28E-03	2.37E-03	5.98E-03	5.49E-02
EP	Eutrophication potential	kg N-Eq.	4.45E-03	1.81E-04	2.00E-04	1.81E-04	4.99E-04	5.51E-03
SP	Smog formation potential	kg O_3-Eq.	6.46E-01	5.36E-02	3.83E-02	5.36E-02	9.35E-02	8.85E-01
FFD	Fossil Fuel Depletion	MJ-surplus	2.20E+01	7.76E-01	9.88E-01	7.76E-01	4.89E+00	2.94E+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**	**C2**	**C4**	**Total**
GWP	Global warming potential	kg CO_2-Eq.	1.75E+01	3.97E-01	2.16E+00	3.97E-01	1.26E+01	3.31E+01
ODP	Depletion potential of the stratospheric ozone layer	kg R-11 Eq	2.24E-07	6.10E-14	6.72E-09	6.10E-14	2.57E-09	2.33E-07
AP Air	Acidification potential for air emissions	kg SO_2-Eq.	3.91E-02	1.74E-03	2.00E-03	1.74E-03	5.48E-03	5.01E-02
EP	Eutrophication potential	Kg P Eq.	5.63E-03	4.45E-04	3.15E-04	4.45E-04	7.37E-04	7.57E-03
POCP	Formation potential of tropospheric ozone photochemical oxidants	kg ethane-Eq.	4.04E-03	-6.63E-04	8.10E-05	-6.62E-04	4.46E-04	3.24E-03
ADPE	Abiotic depletion potential for nonfossil resources[2]	kg Sb-Eq.	2.74E-05	3.12E-08	9.37E-07	3.12E-08	1.47E-07	2.85E-05
ADPF	Abiotic depletion potential for fossil resources[2]	MJ	2.85E+02	5.42E+00	1.17E+01	5.41E+00	5.30E+01	3.61E+02

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

EN15804+A2								
Parameter	**Parameter**	**Unit**	**A1 - A3**	**A4**	**A5**	**C2**	**C4**	**Total**
GWP - total	Climate change - total	kg CO_2-Eq.	1.65E+01	3.95E-01	3.53E+00	3.95E-01	1.27E+01	3.35E+01
GWP - fossil	Climate change - fossil	kg CO_2-Eq.	1.71E+01	3.97E-01	2.14E+00	3.97E-01	1.27E+01	3.27E+01
GWP - biogenic	Climate change - biogenic	kg CO_2-Eq.	-6.18E-01	-5.87E-03	1.38E+00	-5.87E-03	1.11E-02	7.61E-01
GWP - luluc	Climate change - land use and land use change	kg CO_2-Eq.	8.46E-03	3.69E-03	7.17E-04	3.69E-03	2.74E-04	1.68E-02
ODP	Ozone depletion	kg CFC-11 Eq.	2.17E-07	5.18E-14	6.52E-09	5.18E-14	1.97E-09	2.25E-07
AP	Acidification	mol H+ Eq.	4.62E-02	2.56E-03	2.41E-03	2.56E-03	6.57E-03	6.03E-02
EP - freshwater	Eutrophication aquatic freshwater	Kg P Eq.	1.71E-04	1.46E-06	5.49E-06	1.46E-06	2.50E-06	1.82E-04
EP - marine	Eutrophication aquatic marine	kg N Eq.	1.14E-02	1.25E-03	6.95E-04	1.25E-03	1.56E-03	1.62E-02
EP - terrestrial	Eutrophication terrestrial	mol N Eq.	1.17E-01	1.39E-02	8.07E-03	1.39E-02	1.98E-02	1.73E-01
POCP	Photochemical ozone formation	NMVOC Eq.	3.60E-02	2.42E-03	1.93E-03	2.42E-03	4.40E-03	4.72E-02
ADP - minerals & metals	Depletion of abiotic resources - minerals and metals[2]	kg Sb Eq.	3.91E-06	2.64E-08	1.33E-07	2.64E-08	-7.12E-08	4.02E-06
ADP - fossil	Depletion of abiotic resources - fossil fuels[2]	mol N Eq.	3.78E+02	5.42E+00	1.53E+01	5.42E+00	7.30E+01	4.77E+02
WDP	Water use[2]	m^3 world Eq. deprived	1.17E+00	4.81E-03	3.64E-01	4.81E-03	1.71E+00	3.25E+00
PM	Particulate matter emissions	Disease incidence	7.10E-07	9.50E-09	2.83E-08	9.50E-09	5.82E-08	8.16E-07
IRP	Ionizing radiation, human health[1]	kBq U235 Eq.	1.28E+00	1.52E-03	6.43E-02	1.52E-03	5.85E-01	1.93E+00
ETP - fw	Ecotoxicity (freshwater)[2]	CTUe	1.84E+02	3.89E+00	6.65E+00	3.88E+00	1.04E+01	2.09E+02
HTP -c	Human toxicity, cancer effects[2]	CTUh	9.52E-09	7.89E-11	3.48E-10	7.89E-11	8.15E-10	1.08E-08

HTP-nc	Human toxicity, non-cancer effects[2]	CTUh	2.07E-07	3.51E-09	8.17E-09	3.51E-09	1.05E-08	2.33E-07
SQP	Land use related impacts/Soil quality[2]	dimension less	4.86E+01	2.27E+00	2.32E+00	2.27E+00	1.02E+01	6.57E+01

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

1 – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

2 – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

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

Resource Use								
Parameter	**Parameter**	**Unit**	**A1-A3**	**A4**	**A5**	**C2**	**C4**	**Total**
RPR_E	Renewable primary energy as energy carrier	MJ	4.92E+01	3.95E-01	2.54E+00	3.95E-01	2.28E+01	7.53E+01
RPR_M	Renewable primary energy resources as material utilization	MJ	3.75E+02	5.45E+00	1.52E+01	5.44E+00	7.31E+01	4.74E+02
$NRPR_E$	Nonrenewable primary energy as energy carrier	MJ	7.21E+00	5.45E+00	1.54E+01	5.44E+00	7.31E+01	1.07E+02
$NRPR_M$	Nonrenewable primary energy as material utilization	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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
RSF	Use of renewable secondary fuels	MJ	8.30E-24	0.00E+00	2.49E-25	0.00E+00	0.00E+00	8.55E-24
NRSF	Use of nonrenewable secondary fuels	MJ	9.75E-23	0.00E+00	2.92E-24	0.00E+00	0.00E+00	1.00E-22
RE	Energy recovered from disposal of waste	MJ	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	1.49E-01	4.32E-04	1.25E-02	4.32E-04	4.55E-02	2.08E-01

*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.

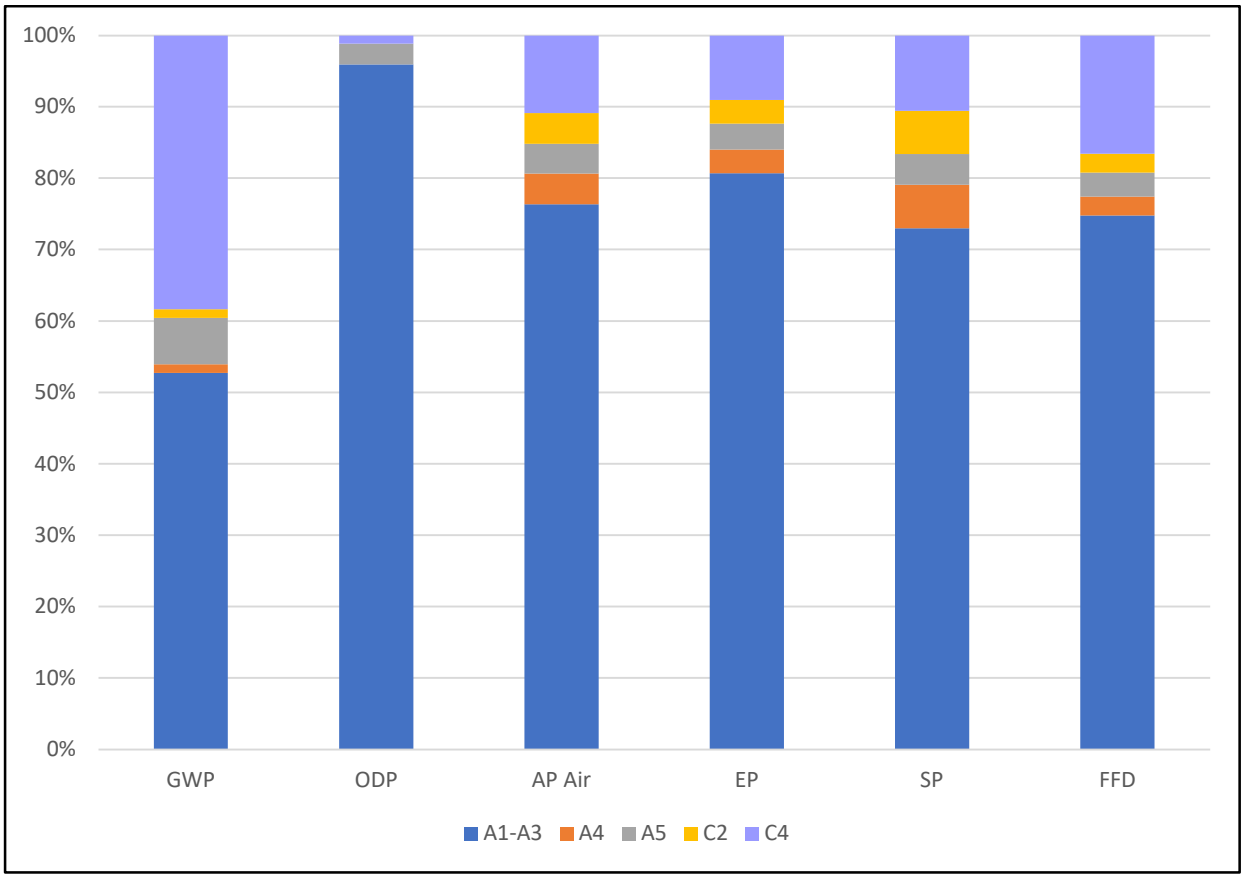
Outflows and Waste Categories								
Parameter	**Parameter**	**Unit**	**A1 - A3**	**A4**	**A5**	**C2**	**C4**	**Total**
HWD	Hazardous waste disposed	kg	8.32E-04	1.69E-11	2.49E-05	1.69E-11	3.80E-09	8.57E-04
NHWD	Non-hazardous waste disposed	kg	7.26E-01	8.30E-04	1.30E-01	8.30E-04	5.50E-02	9.13E-01
HLRW	High-level radioactive waste disposed	kg	7.76E-03	1.02E-05	5.17E-04	1.02E-05	7.09E-03	1.54E-02
ILLRW	Intermediate- and low-level radioactive waste disposed	kg	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
MR	Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	Recovered energy exported from product system	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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**	**C2**	**C4**	**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
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
BCRK	Biogenic Carbon Removal from Packaging	kg CO_2	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+00
BCEK	Biogenic Carbon Emissions from Packaging	kg CO_2	0.00E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	1.44E+00
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
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
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
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

LCA Interpretation

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. Significant impact is also shown at the end of life of the product from incineration of materials in the product.



Product Scaling Factors

The table below indicates the scaling factors for systems indicated in the Product Description section. Results for these systems can be quantified by using the reference system LCA results tables.

Color	Depth	Width	Scaling Factor
Yellow	4	12	1. 0 - 1.03
Black	4	12	0.48 - 1.08
Yellow	4	6	0.47 - 0.56
Black	4	6	0.45 - 0.54
Yellow	4	4	0.35 - 0.92
Black	4	4	0.37 - 0.89
Yellow	4	2	0.14 - 0.41
Black	4	2	0.24 - 0.30
Yellow	2	6	0.32 - 0.52

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
FiberGuide® Fiber Cable Management Raceways comply with applicable 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/.

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

Further Information

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-	PCR Part B	PEP ecopassport Program Product Specific Rules specific for cable management solutions, v2.0, 2023
-	LCA for Experts	Sphera Solutions GmbH. LCA for Experts Software System and Database for Life Cycle Engineering.
-	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
-	ULE 2013	UL Environment, General Program Instructions, 2013
-	ASTM 2020	ASTM International General Program Instructions v8.0, April 29, 2020
-	Characterization Method	IPCC. 2021. 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.
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-	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/
- Contact product compliance at productcompliance@commscope.com
- Contact Corporate Responsibility & Sustainability team for sustainability questions at sustainability@commscope.com

LCA Practitioner

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