

ENVIRONMENTAL PRODUCT DECLARATION

Copper Jacks

MGS400 Series, MGS600 Series, UNJ600T Series,
UNJ10GT Series, MPS100E Series



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.

Environmental Product Declaration

Copper Jacks Unshielded Series
Telecom Accessories

COMMScope®



According to ISO 14025,
EN 15804 + A2

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 794
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	CommScope GigaSPEED XL® M-Series Modular Jack, RJ45, Cat6 Unshielded (MGS400 Series) CommScope GigaSPEED X10D® M-Series Modular Jack, RJ45, Cat6A Unshielded (MGS600 Series) CommScope M-Series Modular Jack, RJ45, Cat6A Unshielded (UNJ10GT Series) CommScope M-Series Modular Jack, RJ45, Cat6 Unshielded (UNJ600T (Series) CommScope PowerSUM M-Series Modular Jack, RJ45, Cat5e Unshielded (MPS100E Series) Functional Unit = weight per product of the copper jack comprised of a connection point used to protect and link or connect for a reference lifetime of 30 years with a 70% use rate
REFERENCE PCR AND VERSION NUMBER	PEP ecopassport Program: PSR Specific Rules for Wires, Cables, and Accessories (PSR-0001-ed4-EN-2022 11 16)
DESCRIPTION OF PRODUCT APPLICATION/USE	CommScope copper jacks protect and link telecommunication devices in buildings
PRODUCT RSL DESCRIPTION (IF APPL.)	30 Years
MARKETS OF APPLICABILITY	Global
DATE OF ISSUE	September 19, 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	2023
LCA SOFTWARE DATABASE(S) & VERSION NUMBER	LCA for Experts v10.8.0.14 & 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 "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



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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.

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

Copper jacks protect and link a connection point for telecommunication applications in buildings.

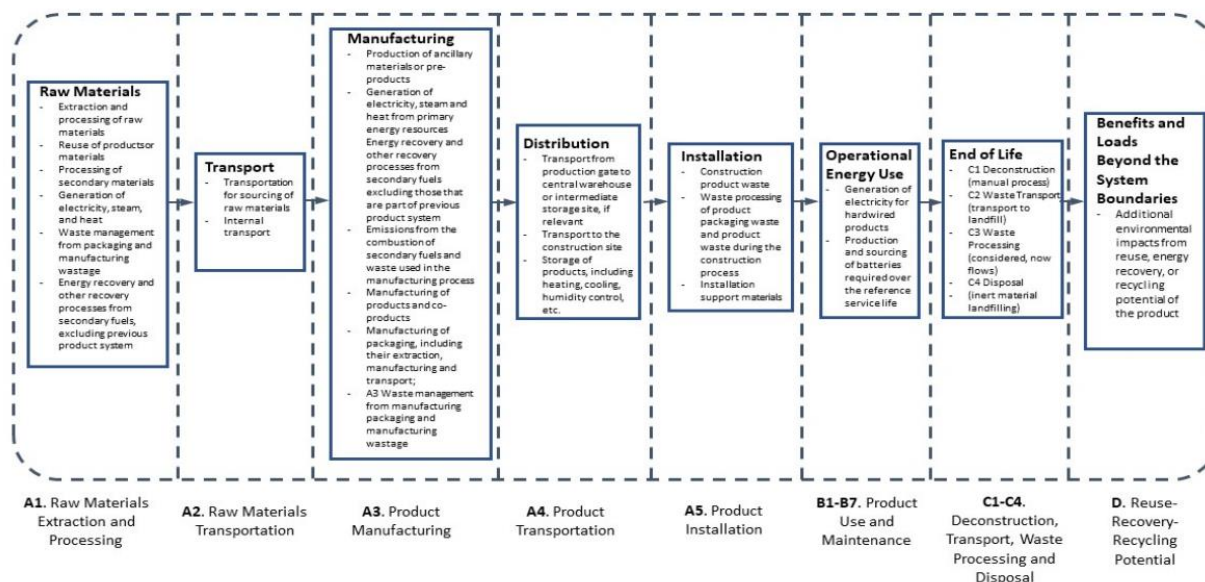
Product Type: Copper Jacks are telecom accessories

Product Characteristic:

This EPD covers specific parts in the following CommScope copper jacks product series:

- CommScope GigaSPEED XL® M-Series Modular Jack, RJ45, Cat6 Unshielded (MGS400 Series)
- CommScope GigaSPEED X10D® M-Series Modular Jack, RJ45, Cat6A Unshielded (MGS600 Series)
- CommScope M-Series Modular Jack, RJ45, Cat6A Unshielded (UNJ10GT Series)
- CommScope M-Series Modular Jack, RJ45, Cat6 Unshielded (UNJ600T Series)
- CommScope PowerSUM M-Series Modular Jack, RJ45, Cat5e Unshielded (MPS100E 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 company personnel. An impact assessment was completed for the M series jacks including the MGS400 Series, MGS600 Series, UNJ10GT Series, UNJ600T Series, and MPS100E Series copper jacks. This EPD covers five product series. An impact assessment was completed for each product series and the product series with the highest impact is reported. Other product series are represented through the scaling factor table and can be independently calculated.

Application

The copper jacks products are designed to protect and link a connection point to other telecom devices in buildings.

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 composition of CommScope copper jacks is as follows:

Product Series	Thermoplastic Resin	Copper Alloy Plated	Printed Wiring Board (PWB)	Paper
MGS400	73.82%	3.51%	22.40%	0.27%
MGS600	74.14%	3.67%	21.93%	0.26%
UNJ10GT	74.14%	3.67%	21.93%	0.26%
UNJ600T	74.14%	3.67%	21.93%	0.26%
MPS100E	72.60%	3.67%	23.45%	0.28%

Placing on the Market / Application Rules

ANSI/TIA-568.2-D
ISO/IEC 11801-1
IEC 60603-7
EN 50173-1
IEEE 802.3bt Type 4 (90 W) applications
cULus Listed
UL 94 V-0 Flammability Rated

Properties of Declared Product as Shipped

CommScope copper jacks 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 copper jack.

Name	Value	Unit
Declared Unit	1	Copper Jack
Mass	7.08E-03 to 7.66E-03	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.

Reference Service Life

The reference service life of a copper jack is 30 years with a 70% use rate.

Allocation

Allocation was determined on a per kg 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 2023.

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 Reynosa, Mexico CommScope plant produces copper jacks. The manufacturing process for the molded plastic parts begins with plastic granulate being fed into the injection molding process through a hopper. Electric heating elements are used to heat the pellets 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 by water and compressed air. Compressed air is used to eject the part from the mold.

Copper alloy strips are stamped and plated to make up lead frames and insulation displacement contacts (IDCs) which are assembled into every jack. The IDC strips are plated. Lead frames are also selectively plated. These reels with the required plated strips are fed into the appropriate final assembly machines. As they are fed into the final assembly machines special dies cut them away from the carrier strip and the singulated parts are inserted into final assembly jacks.

Every final assembly jack also contain one or two PWB depending on the performance Category. All PWBs are supplied from external suppliers.

Adhesive wiring labels are also attached to all jack assemblies. These wiring labels identify the color scheme required to punch-down twisted pair cordage during field termination.

Copper jacks are assembled utilizing automated and semi-automated assembly systems. All components are loaded into the appropriate machines as required for assembly. All jacks are 100% vision-system inspected, 100% electrically tested, quality control (QC) inspected as required, and packaged as required for shipment.

Various packaging options exist, but most product is bagged and boxed. Once packaged, copper jacks are shipped to customers.



Packaging

All packaging is fully recyclable and is primarily cardboard, with plastic materials are used for individual product packaging.

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Quantity % by Weight	
Material	Maximum
Plastic	26.34%
Paper	0.21%
Cardboard	73.45%
Total	100.00%

Transformation

Transport to Building Site (A4)				
Description	Distribution Breakdown	Transport Mode / Fuel	Distance	Unit
International Transport	72%	Lorry > 27t /diesel	1000	km
		Boat	19000	km
Intracontinental Transport	28%	Lorry > 27t /diesel	3500	km
Liters of Fuel	33.1			l/100 km
Capacity Utilization	85			%
Weight of one copper jack with packaging transported	7.08E-03	to	7.66E-03	kg

Product Installation

CommScope copper jacks 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. No installation scrap was assumed since each product is designed to be an installed product in its entirety. 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	0.00E+00	kg
Waste materials at construction site	0.00E+00	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)	4.77E-03	kg
Packaging waste (incineration)	4.77E-03	kg
Direct emissions to ambient air*, soil, and water	3.51E-03	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
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 fresh water 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. The product is disposed through waste incineration with energy recovery or landfilled, in accordance with the PCR.

End of Life (C1-C4)		
Name	Max	Unit
Collected separately	0.00E+00	kg
Collected as mixed construction waste	7.66E-03	kg
Reuse	0.00E+00	kg
Recycling	1.01E-03	kg
Landfilling	3.79E-03	kg
Incineration with energy recovery	2.84E-03	kg
Energy conversion	25.00	%
Removals of biogenic carbon	-	kg

Re-use Phase

Re-use of the product is not common.

LCA Results – Maximum Impact

Results shown below were calculated using the TRACI 2.1 Methodology

TRACI 2.1 Impact Assessment									
Parameter	Parameter	Units	A1 - A3	A4	A5	C2	C3	C4	Total
GWP	Global Warming	kg CO ₂ -Eq.	8.39E-02	9.58E-03	1.28E-02	7.10E-04	6.00E-03	1.09E-04	1.13E-01
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	2.14E-13	3.64E-13	3.49E-14	2.69E-14	1.46E-17	6.92E-18	6.40E-13
AP Air	Acidification potential for air emissions	kg SO ₂ -Eq.	3.71E-04	1.31E-04	1.83E-05	4.27E-06	7.34E-06	5.97E-07	5.32E-04
EP	Eutrophication potential	kg N- Eq.	2.80E-05	7.81E-06	4.33E-06	2.36E-07	3.08E-07	3.25E-07	4.10E-05
SP	Smog formation potential	kg O ₃ -Eq.	5.19E-03	4.19E-03	2.47E-04	1.17E-04	1.46E-04	9.87E-06	9.90E-03
FFD	Fossil Fuel Depletion	MJ -surplus	2.23E-01	1.70E-02	2.77E-03	1.26E-03	2.38E-04	2.27E-04	2.44E-01

*Stages B1 through B7, C1 through C4, and D 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	Units	A1 - A3	A4	A5	C2	C3	C4	Total
GWP	Global warming potential	kg CO ₂ -Eq.	8.48E-02	9.61E-03	1.38E-02	7.12E-04	6.00E-03	1.10E-04	1.15E-01
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	5.07E-13	3.64E-13	3.69E-14	2.68E-14	8.61E-16	4.09E-16	9.36E-13
AP Air	Acidification potential for air emissions	kg SO ₂ -Eq.	3.57E-04	9.95E-05	8.10E-06	3.50E-06	5.64E-06	5.73E-07	4.75E-04
EP	Eutrophication potential	kg(PO ₄) ³⁻ -Eq.	4.11E-05	2.20E-05	1.06E-05	6.24E-07	8.19E-07	5.81E-07	7.57E-05
POCP	Formation potential of tropospheric ozone photochemical oxidants	kg ethane-Eq.	2.95E-05	9.53E-06	3.53E-06	4.09E-07	2.00E-07	4.80E-08	4.32E-05
ADPE	Abiotic depletion potential for non-fossil resources	kg Sb-Eq.	5.93E-06	4.00E-12	2.54E-10	2.95E-13	1.16E-10	3.41E-11	5.93E-06
ADPF	Abiotic depletion potential for fossil resources	MJ	1.65E+00	1.23E-01	2.07E-02	9.06E-03	1.77E-03	1.70E-03	1.81E+00

*Stages B1 through B7, C1 through C4, and D 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.

EN 15804 +A2 Impact Assessment									
Parameter	Parameter	Units	A1 - A3	A4	A5	C2	C3	C4	Total
GWP - total	Climate change - total	kg CO ₂ -Eq	7.14E-02	9.63E-03	1.80E-02	7.14E-04	6.00E-03	1.10E-04	1.06E-01
GWP - fossil	Climate change - fossil	kg CO ₂ -Eq	8.48E-02	9.63E-03	4.91E-03	7.14E-04	6.00E-03	1.10E-04	1.06E-01
GWP - biogenic	Climate change - biogenic	kg CO ₂ -Eq	-1.35E-02	0.00E+00	1.31E-02	0.00E+00	3.47E-07	-4.15E-07	-4.00E-04
GWP - luluc	Climate change - land use and land use change	kg CO ₂ -Eq	1.00E-04	0.00E+00	1.08E-06	0.00E+00	8.47E-08	4.68E-07	1.02E-04
ODP	Ozone depletion	kg CFC-11 Eq.	3.94E-13	2.51E-13	2.58E-14	1.85E-14	7.32E-16	3.48E-16	6.91E-13
AP	Acidification	mol H+ Eq	4.18E-04	1.41E-04	1.00E-05	4.73E-06	4.70E-06	6.90E-07	5.79E-04
EP-freshwater	Eutrophication aquatic freshwater	kg P-Eq	1.21E-06	2.75E-09	4.54E-08	2.03E-10	2.11E-10	4.80E-08	1.31E-06
EP-marine	Eutrophication aquatic marine	kg N Eq	8.71E-05	6.51E-05	7.28E-06	1.82E-06	2.33E-06	1.57E-07	1.64E-04
EP-terrestrial	Eutrophication terrestrial	mol N Eq	9.27E-04	7.12E-04	4.14E-05	1.98E-05	2.64E-05	1.72E-06	1.73E-03
POCP	Photochemical ozone formation	NMVOE Eq	2.61E-04	1.78E-04	1.54E-05	5.36E-06	5.97E-06	4.94E-07	4.66E-04
ADP - minerals metals*	Depletion of abiotic resources - minerals and metal	kg Sb Eq.	5.78E-06	0.00E+00	3.01E-11	0.00E+00	8.28E-12	7.29E-12	5.78E-06
ADP-fossil*	Depletion of abiotic resources - fossil fuels	mol N Eq.	1.72E+00	1.24E-01	2.12E-02	9.14E-03	1.97E-03	1.76E-03	1.88E+00
WDP**	Water use	m3 world Eq. deprived	1.53E-02	0.00E+00	4.02E-04	0.00E+00	7.70E-04	1.39E-05	1.65E-02
PM	Particulate matter emissions	Disease incidence	3.73E-09	4.19E-10	6.16E-11	1.87E-11	1.72E-11	7.56E-12	4.26E-09
IRP	Ionizing radiation, human health	kBq U235 Eq	2.06E-03	2.18E-21	2.14E-05	1.61E-22	1.07E-05	3.16E-06	2.10E-03
ETP-fw	Ecotoxicity (freshwater)	CTUe	1.15E+00	1.80E-01	3.42E-02	1.32E-02	8.65E-04	3.26E-03	1.38E+00
HTP-c	Human toxicity, cancer effects	CTUh	6.38E-11	2.61E-12	4.50E-13	1.92E-13	4.54E-14	5.01E-14	6.72E-11
HTP-nc	Human toxicity, non-cancer effects	CTUh	8.62E-10	1.78E-10	4.12E-11	1.31E-11	3.85E-12	1.13E-12	1.10E-09
SQP	Land use related impacts/Soil quality	dimensionless	4.52E-01	0.00E+00	1.20E-03	0.00E+00	4.44E-04	3.37E-04	4.54E-01

Stages B1 through B7, C1 through C4, and D have been considered and only those with non-zero values have been reported

*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.

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

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

EN 15804 +A2 Resource Use									
Parameter	Parameter	Units	A1 - A3	A4	A5	C2	C3	C4	Total
RPR _E	Renewable primary energy as energy carrier	MJ	3.86E-01	0.00E+00	1.23E-03	0.00E+00	4.29E-04	2.75E-04	3.88E-01
RPR _M	Renewable primary energy resources as material utilization	MJ	3.86E-01	0.00E+00	1.23E-03	0.00E+00	4.29E-04	2.75E-04	3.88E-01
NRPR _E	Nonrenewable primary energy as energy carrier	MJ	1.72E+00	1.24E-01	2.12E-02	9.14E-03	1.97E-03	1.76E-03	1.88E+00
NRPR _M	Nonrenewable primary energy as material utilization fuels	MJ	1.72E+00	1.24E-01	2.12E-02	9.14E-03	1.97E-03	1.76E-03	1.88E+00
SM	Use of secondary material secondary fuels	MJ	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
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
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
FW	Use of net fresh water	m ³	5.70E-04	0.00E+00	9.79E-06	0.00E+00	1.81E-05	4.16E-07	5.98E-04

Stages B1 through B7, C1 through C4, and D 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.

EN15804+A2 - Outflows and Waste Categories									
Parameter	Parameter	Units	A1 - A3	A4	A5	C2	C3	C4	Total
HWD	Hazardous waste disposed	kg	1.24E-07	0.00E+00	2.27E-12	0.00E+00	9.19E-13	4.37E-13	1.24E-07
NHWD	Non-hazardous waste disposed	kg	2.69E-03	0.00E+00	5.86E-03	0.00E+00	1.88E-04	4.62E-03	1.34E-02
HLRW	High-level radioactive waste disposed	kg	2.00E-05	0.00E+00	1.48E-07	0.00E+00	7.04E-08	2.36E-08	2.02E-05
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	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
MR	Materials for recycling	kg	6.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	6.26E-02
MER	Materials for energy recovery	kg	0.00E+00	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	0.00E+00

Stages B1 through B7, C1 through C4, and D have been considered and only those with non-zero values have been reported

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

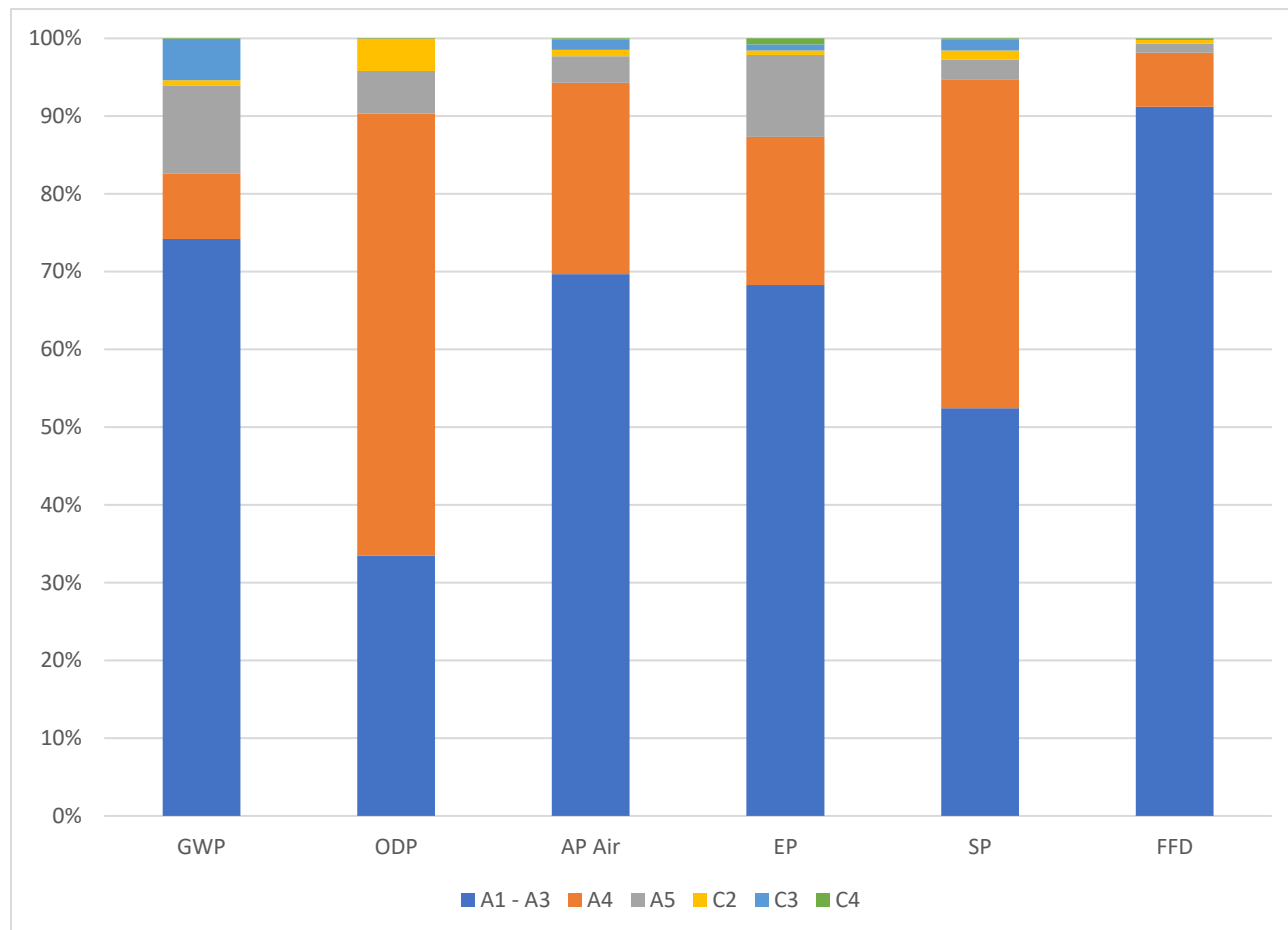
EN 15804 +A2 Resource Use									
Parameter	Parameter	Units	A1 - A3	A4	A5	C2	C3	C4	Total
BCRP	Biogenic Carbon Removal from Product	kg CO ₂	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	Biogenic Carbon Emissions from Product	kg CO ₂	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	Biogenic Carbon Removal from Packaging	kg CO ₂	3.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-03
BCEK	Biogenic Carbon Emissions from Packaging	kg CO ₂	0.00E+00	0.00E+00	3.51E-03	0.00E+00	0.00E+00	0.00E+00	3.51E-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
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
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
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

Stages B1 through B7, C1 through C4, and D have been considered and only those with non-zero values have been reported



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 in all impact categories due to the distance assumption requirements.



Scaling Factor Tables

For EPDs with multiple product series, an impact assessment was completed for each product series and the maximum impacts were reported in this EPD. The rest of the product series are represented through the scaling factor table below and can be independently calculated. Full impact results are reported on the maximum impact product series which covers the MGS600 series, UNJ10GT series, and the UNJ600T series copper jacks.

A1-A3						
Product Name	GWP	ODP	AP	EP	PCOP	FFD/ADP
MPS100E Series	8.33E-01	8.19E-01	8.73E-01	9.04E-01	8.07E-01	8.39E-01
MGS400 Series	9.32E-01	8.57E-01	9.26E-01	9.61E-01	8.74E-01	9.58E-01

A4	A5	C2	C3	C4	Total
1.05E+00	1.01E+00	1.08E+00	1.10E+00	1.08E+00	8.65E-01
1.02E+00	1.00E+00	1.03E+00	1.04E+00	1.04E+00	9.45E-01

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 2.1 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>

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

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<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 Wires, Cables and Accessories, v4.0, 2022
- 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
- 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.

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Contact Information

Study Commissioner

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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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