# <u>COMMSCOPE®</u>

# **ENVIRONMENTAL PRODUCT DECLARATION**

D' 2' 3' 4' 6' 6

# **Copper Patch Panels**

SYSTIMAX<sup>®</sup> 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit imVision<sup>®</sup>

Overlays June 3, 2025

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.

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## 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 CONSHO	DHOCKEN, 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 990				
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	Functional Unit = weight per product of	CommScope SYSTIMAX® 360 <sup>™</sup> iPatch® Upgrade Kit imVision® Overlays Functional Unit = weight per product of the imVision® Overlay 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 Speci 0001-ed4-EN-2022 11 16)	fic Rules for Wires, Cables, and Accessories (PSR-			
DESCRIPTION OF PRODUCT APPLICATION/USE	CommScope SYSTIMAX® 360™ iPatc	h® Upgrade Kit imVision® Overlays			
PRODUCT RSL DESCRIPTION (IF APPL.)	30 Years				
MARKETS OF APPLICABILITY	Global				
DATE OF ISSUE	June 3, 2025				
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 v10.9.0.20 & USLCI v2	v2.0			
LCIA METHODOLOGY & VERSION NUMBER	TRACI 2.1 ; CML 4.1 ; EN 15804 +A2 E	EF3.1			
The sub-category PCR review was conducted by:	Hy Beone				
This declaration was independently verified in acco ecopassport Program PCR for electrical, electronic based on EN 15804:2012 + A2:2019, serves as the INTERNAL	Timothy S Brooke ASTM International				
This life cycle assessment was conducted in accord PCR by: This life cycle assessment was independently verifi reference PCR by:		Homer Storie			

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**

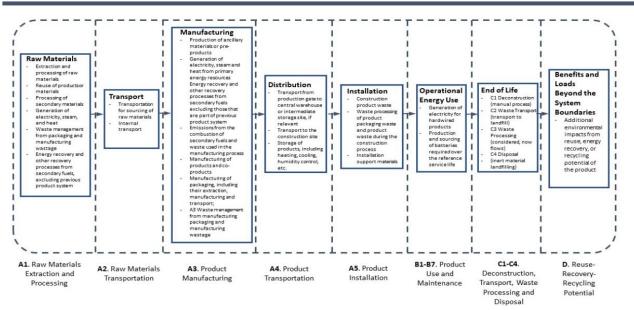
imVision<sup>®</sup> Overlays are accessories to copper patch panels that provide enhanced digital management of copper connections within a telecommunication network.

Product Type: Copper Patch Panel imVision® Overlays are telecom accessories

This EPD covers specific product ids in the following CommScope copper patch panel product series:

SYSTIMAX 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit imVision<sup>®</sup> Overlays

# **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 SYSTIMAX<sup>®</sup> 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit imVision<sup>®</sup> Overlays. This EPD covers one product series consisting of 5 product ids. An impact assessment was completed for each product in the series and the product series with the highest impact is reported. Other product ids are represented through the scaling factor table and can be independently calculated.

#### Application

imVision<sup>®</sup> Overlays are accessories to copper patch panels that provide enhanced digital management of copper connections within a telecommunication network.

# **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 the reference CommScope imVision<sup>®</sup> Overlays is as follows:

Product Series	Cable Bus Jumper (Copper and PVC/PBT)	Housing (PC/ABS)	iPatch® Overlay (PC)	Cable Flex Flat (Copper and PET)	PCB (Epoxy glass and Electronic Components)	Labels (Vinyl, Polyester, Paper)	Total
SYSTIMAX <sup>®</sup> 360 <sup>™</sup> iPatch <sup>®</sup> Upgrade Kit imVision <sup>®</sup> Overlays	15.40%	23.95%	3.42%	1.71%	53.04%	2.48%	100.00%

# Placing on the Market / Application Rules

ANSI/TIA-568.2-D ISO/IEC 11801-1

#### **Properties of Declared Product as Shipped**

CommScope imVision<sup>®</sup> Overlays 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 imVision<sup>®</sup> Overlay.

Name	Value	Unit
Declared Unit	1	Copper Patch Panel Overlay
Mass	4.45E-02 to 9.10E-02	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
	Raw Material Supply	A1	Х
Product Stage	Transport	A2	Х
	Manufacturing	A3	Х
Construction Process Stage	Transport from gate to the site	A4	Х
construction rocess stage	Construction/Installation process	A5	Х
	Use	B1	Х
	Maintenance	B2	Х
	Repair	B3	Х
Use Stage	Replacement	B4	Х
	Refurbishment	B5	Х
	Operational energy use	B6	Х
	Operational water use	B7	Х
	Deconstruction/ demolition	C1	Х
End of Life Steers*	Transport	C2	Х
End of Life Stage*	Waste processing	C3	Х
	Disposal	C4	Х
Benefits and Loads Beyond the System Boundaries	Reuse-Recovery-Recycling potential	D	Х

\*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 imVision<sup>®</sup> Overlay 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.

# **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

CommScope's imVision<sup>®</sup> Overlays are produced with cables, connectors, electronic components and accessories, plastic components, printed circuit boards, and plastic and paper labels.

These parts are assembled into subassemblies of the overlays and other child parts are packaged loose. The overlays are electrically tested and packaged into a box. Once packaged, imVision<sup>®</sup> Overlays are shipped to customers.



# Packaging

All packaging is fully recyclable and is primarily cardboard, with plastic materials are used for individual product packaging. Biogenic carbon content of packaging is -4.20E-02 kg CO<sub>2</sub> as reported in the EN15804+A2 Resource Use table.

Quantity % by Weight						
Material	Maximum					
Plastic	15.15%					
Paper	0.002%					
Cardboard	84.85%					
Total	100.00%					





**Transportation** 

Transport to Building Site (A4)								
Description	Distribution Breakdown	Transport Mode / Fuel	Distance	Unit				
International Transport	80%	Lorry > 27t /diesel	1000	km				
International Transport	80%	Boat	19000	km				
Intracontinental Transport	20%	Lorry > 27t /diesel	3500	km				
Liters of Fuel		33.1		l/100 km				
Capacity Utilization		85		%				
Weight of one copper patch panel overlay kit with packaging transported (maximum)	6.53E-01							

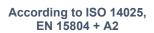
Patch panel overlay kits consist of 5 overlays or 10 overlays.

# **Product Installation**

CommScope imVision<sup>®</sup> Overlays 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	-	m³				
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)	9.90E-02	kg				
Packaging waste (incineration)	9.90E-02	kg				
Direct emissions to ambient air*, soil, and water	4.20E-02	kg CO <sub>2</sub>				
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 water use during use. Operational energy use was modeled as use stage losses per the PSR.





Operational Energy Use (B6)		
	Value	Unit
Ancillary materials specified by material	-	kg
Net fresh water consumption	-	m <sup>3</sup>
Electricity consumption	0.072	MJ
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	4.55E-02	kg					
Reuse	0.00E+00	kg					
Recycling	1.44E-02	kg					
Landfilling	2.18E-02	kg					
Incineration with energy recovery	9.23E-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

TRACI 2.1 Im	TRACI 2.1 Impact Assessment									
Parameter	Parameter	Units	A1 - A3	A4	A5	B6	C2	C3	C4	Total
GWP	Global Warming	kg CO₂ -Eq.	2.53E+00	2.80E-02	3.67E-02	2.53E-01	4.58E-03	1.69E-02	4.44E-04	2.87E+00
ODP	Depletion potential of the stratospheric ozone layer	kg CFC- 11 Eq.	2.03E-13	6.80E-13	1.34E-16	6.30E-14	9.43E-18	4.10E-17	2.71E-17	9.46E-13
AP Air	Acidification potential for air emissions	kg SO₂ -Eq.	1.75E-02	4.34E-04	3.21E-05	1.45E-03	2.67E-05	2.07E-05	2.52E-06	1.95E-02
EP	Eutrophication potential	kg N- Eq.	5.99E-04	2.49E-05	5.86E-06	3.68E-04	2.12E-06	8.68E-07	1.01E-06	1.00E-03
SP	Smog formation potential	kg O₃ - Eq.	1.47E-01	1.23E-02	4.08E-04	1.68E-02	6.00E-04	4.12E-04	4.33E-05	1.77E-01
FFD	Fossil Fuel Depletion	MJ - surplus	3.94E+00	5.06E-02	5.84E-03	3.21E-01	8.74E-03	6.71E-04	8.82E-04	4.32E+00

# Results shown below were calculated using the TRACI 2.1 Methodology

\*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 Imp	CML 4.1 Impact Assessment									
Parameter	Parameter	Units	A1 - A3	A4	A5	B6	C2	C3	C4	Total
GWP	Global warming potential	kg CO₂ -Eq	2.44E+00	2.82E-02	3.80E-02	2.62E-04	4.61E-03	1.69E-02	4.48E-04	2.52E+00
ODP	Depletion potential of the stratospheric ozone layer	kg CFC-11 Eq.	7.91E-12	6.80E-13	7.92E-15	6.97E-15	5.53E-16	2.43E-15	1.60E-15	8.60E-12
AP Air	Acidification potential for air emissions	kg SO <sub>2</sub> -Eq.	1.80E-02	3.43E-04	1.71E-05	5.14E-07	1.96E-05	1.59E-05	2.40E-06	1.84E-02
EP	Eutrophication potential	kg(PO <sub>4</sub> ) <sup>3</sup> -Eq.	1.02E-03	6.88E-05	1.42E-05	6.24E-08	5.04E-06	2.31E-06	1.82E-06	1.11E-03
РОСР	Formation potential of tropospheric ozone photochemical oxidants	kg ethane -Eq.	8.69E-04	7.33E-06	2.36E-07	3.81E-08	-8.10E-06	5.62E-07	1.99E-07	8.69E-04
ADPE	Abiotic depletion potential for non-fossil resources	kg Sb- Eq	2.38E-07	9.95E-10	1.58E-09	6.60E-11	4.59E-10	3.26E-10	1.39E-10	2.42E-07
ADPF	Abiotic depletion potential for fossil resources	MJ	3.16E+01	3.60E-01	4.52E-02	3.01E-03	6.06E-02	4.99E-03	6.60E-03	3.21E+01

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



# Environmental Product Declaration

imVision® Overlays SYSTIMAX® 360™ iPatch® Upgrade Kit Telecom Accessories



#### According to ISO 14025, EN 15804 + A2

# Results below are calculated using methodology EN 15804 +A2 EF3.1 version.

EN15804 + A2 Impact Assessment										
Parameter	Parameter	Units	A1 - A3	A4	A5	B6	C2	C3	C4	Total
GWP - total	Climate change - total	kg CO <sub>2</sub> -Eq	2.58E+00	2.83E-02	4.30E-02	2.63E-04	4.66E-03	1.69E-02	4.49E-04	2.67E+00
GWP - fossil	Climate change - fossil	kg CO <sub>2</sub> -Eq	2.57E+00	2.82E-02	2.74E-02	2.61E-04	4.63E-03	1.69E-02	4.49E-04	2.65E+00
GWP - biogenic	Climate change - biogenic	kg CO <sub>2</sub> -Eq	-4.20E-02	0.00E+00	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - luluc	Climate change - land use and land use change	kg CO₂ -Eq	1.32E-03	1.69E-04	3.64E-05	3.97E-08	7.83E-05	2.39E-07	2.12E-06	1.61E-03
ODP	Ozone depletion	kg CFC-11 Eq.	9.54E-12	4.69E-13	6.73E-15	5.92E-15	4.70E-16	2.06E-15	1.36E-15	1.00E-11
AP	Acidification	mol H+ Eq	1.99E-02	4.76E-04	1.95E-05	5.03E-07	2.87E-05	1.32E-05	2.91E-06	2.04E-02
EP-freshwater	Eutrophication aquatic freshwater	kg P-Eq	1.01E-05	4.80E-08	6.07E-08	1.08E-09	1.99E-08	5.95E-10	1.44E-07	1.04E-05
EP-marine	Eutrophication aquatic marine	kg N Eq	2.34E-03	2.02E-04	1.26E-05	1.26E-07	1.41E-05	6.56E-06	6.86E-07	2.58E-03
EP-terrestrial	Eutrophication terrestrial	mol N Eq	2.55E-02	2.22E-03	9.74E-05	1.31E-06	1.56E-04	7.43E-05	7.55E-06	2.81E-02
РОСР	Photochemical ozone formation	NMVOC Eq	7.35E-03	5.25E-04	2.36E-05	3.33E-07	2.70E-05	1.68E-05	2.15E-06	7.94E-03
ADP - minerals metals*	Depletion of abiotic resources - minerals and metal	kg Sb Eq.	4.79E-05	8.55E-10	2.54E-10	4.88E-11	3.97E-10	2.33E-11	2.95E-11	4.79E-05
ADP-fossil*	Depletion of abiotic resources - fossil fuels	mol N Eq.	3.51E+01	3.62E-01	4.67E-02	5.47E-03	6.09E-02	5.55E-03	6.85E-03	3.56E+01
WDP**	Water use	m3 world Eq. deprived	5.71E-01	1.50E-04	2.45E-03	7.11E-05	6.94E-05	2.17E-03	5.51E-05	5.76E-01
РМ	Particulate matter emissions	Disease incidence	1.90E-07	1.72E-09	1.56E-10	4.21E-12	1.84E-10	4.84E-11	3.33E-11	1.92E-07
IRP	lonizing radiation, human health	kBq U235 Eq	6.88E-02	2.37E-05	7.19E-05	1.44E-04	1.10E-05	3.01E-05	1.14E-05	6.91E-02
ETP-fw	Ecotoxicity (freshwater)	CTUe	1.62E+01	4.31E-01	4.58E-02	1.59E-03	4.48E-02	2.44E-03	1.07E-02	1.68E+01
HTP-c	Human toxicity, cancer effects	CTUh	7.55E-10	6.81E-12	9.30E-13	8.89E-14	9.00E-13	1.28E-13	1.71E-13	7.64E-10
HTP-nc	Human toxicity, non-cancer effects	CTUh	1.73E-08	4.18E-10	7.03E-11	1.37E-12	4.00E-11	1.08E-11	4.22E-12	1.79E-08
SQP	Land use related impacts/Soil quality brough B7, C1 throu	dimension less	4.92E+00	6.49E-02	1.69E-02	2.31E-03	3.01E-02	1.25E-03	1.44E-03	5.04E+00

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.



# Environmental Product Declaration imVision® Overlays

SYSTIMAX<sup>®</sup> 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit Telecom Accessories



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	B6	C2	C3	C4	Total
RPR <sub>E</sub>	Renewable primary energy as energy carrier	MJ	8.72E+00	1.11E-02	6.10E-03	3.96E-03	5.14E-03	1.21E-03	1.10E-03	8.74E+00
RPRM	Renewable primary energy resources as material utilization	MJ	8.72E+00	1.11E-02	6.10E-03	3.96E-03	5.14E-03	1.21E-03	1.10E-03	8.74E+00
NRPR <sub>E</sub>	Nonrenewable primary energy as energy carrier	MJ	3.51E+01	3.62E-01	4.67E-02	5.47E-03	6.09E-02	5.55E-03	6.85E-03	3.56E+01
NRPR <sub>M</sub>	Nonrenewable primary energy as material utilization fuels	MJ	3.51E+01	3.62E-01	4.67E-02	5.47E-03	6.09E-02	5.55E-03	6.85E-03	3.56E+01
SM	Use of secondary material secondary fuels	MJ	0.00E+00							
RSF	Use of renewable secondary fuels	MJ	0.00E+00							
NRSF	Use of nonrenewable secondary fuels	MJ	0.00E+00							
RE	Energy recovered from disposed waste	MJ	0.00E+00							
FW	Use of net fresh water	m³	1.64E-02	1.24E-05	6.05E-05	3.02E-06	5.78E-06	5.10E-05	1.66E-06	1.65E-02

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	EN15804+A2 - Outflows and Waste Categories									
Parameter	Parameter	Units	A1 - A3	A4	A5	B6	C2	C3	C4	Total
HWD	Hazardous waste disposed	kg	6.09E-07	4.24E-12	8.74E-12	7.89E-12	1.97E-12	2.59E-12	1.70E-12	6.09E-07
NHWD	Non- hazardous waste disposed	kg	9.48E-02	2.04E-05	8.72E-03	4.52E-06	9.47E-06	5.30E-04	2.18E-02	1.26E-01





# Environmental Product Declaration

imVision<sup>®</sup> Overlays

**Telecom Accessories** 

SYSTIMAX<sup>®</sup> 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit



## According to ISO 14025, EN 15804 + A2

High-level radioactive HLRW 6.47E-04 1.69E-07 5.14E-07 8.72E-07 7.87E-08 1.98E-07 8.71E-08 6.49E-04 kg waste disposed Intermediateand low-level 0.00E+00 0.00E+00 ILLRW radioactive 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 kg waste disposed Components 0.00E+00 0.00E+00 CRU 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 kg for re-use Materials for MR 8.33E-01 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.44E-02 8.47E-01 kg recycling Materials for 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 MER energy 0.00E+00 0.00E+00 0.00E+00 kg recovery Recovered energy EE exported MJ 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 from product system

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

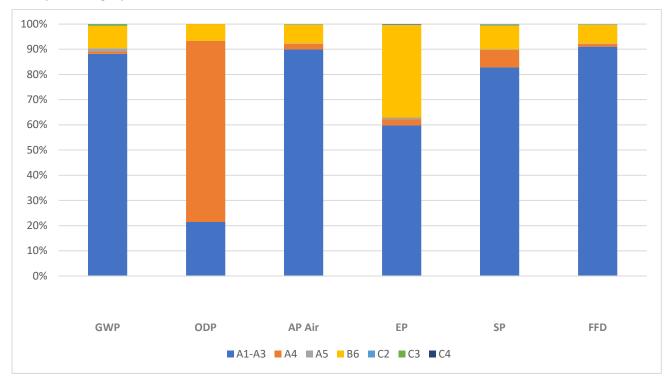
EN 15804 +A2 Resource Use										
Parameter	Parameter	Units	A1 - A3	A4	A5	B6	C2	C3	C4	Total
BCRP	Biogenic Carbon Removal from Product	kg CO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	Biogenic Carbon Emissions from Product	kg CO₂	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	Biogenic Carbon Removal from Packaging	kg CO₂	-4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.20E-02
ВСЕК	Biogenic Carbon Emissions from Packaging	kg CO₂	0.00E+00	0.00E+00	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-02
BCEW	Biogenic Carbon Emissions from Combustio n 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	0.00E+00
CCE	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	0.00E+00
CCR	Carbonatio n Carbon Removal	kg CO <sub>2</sub>	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	Carbon Emissions from Combustio n 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	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 except ozone depletion ODP. The A1-A3 stage impact 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 shown by the A4 distribution stage in the ODP impact category due to the distance assumption requirements. The B6 operational energy usage is also present in all impact categories and is most significant in the eutrophication EP impact category.







## **Scaling Factor Tables**

Full impact results are reported above on the maximum impact product. Since there are multiple products in this series covered in this EPD, the TRACI impact assessment was completed for each product in the series as shown in the table below. The maximum product is listed first in the table for comparison. The total result includes A1-A3 GWP plus the stages A4, A5, C2, C3, and C4. The functional unit for the imVision overlays is one overlay. The product ids indicate a pack of 5 or 10 based on the description. Full impact results for the kit may be multiplied by the number of overlays in the kit to determine results for the entire kit.

	-	ŀ	A1-A3				
Product ID	Product Name	GWP	ODP	АР	EP	РСОР	FFD/ADP
760202630	SYSTIMAX 360™ iPatch® Upgrade Kit for Evolve Angled Panel, 24 Port, 10 pack	2.53E+00	2.03E-13	1.75E-02	5.99E-04	1.47E-01	3.94E+00
760202648	SYSTIMAX 360™ iPatch <sup>®</sup> Upgrade Kit for Evolve Angled Panel, 48 Port, 5 pack	5.06E+00	4.06E-13	3.50E-02	1.20E-03	2.94E-01	7.88E+00
760198747	SYSTIMAX 360™ iPatch® Upgrade Kit, Evolve, 24 port, 10 pack	2.52E+00	2.02E-13	1.73E-02	5.89E-04	1.46E-01	3.90E+00
760198754	SYSTIMAX 360™ iPatch® Upgrade Kit, Evolve and PATCHMAX® Panel, 48 port, 5 pack	5.06E+00	4.06E-13	3.50E-02	1.16E-03	2.94E-01	7.88E+00
760198762	SYSTIMAX 360™ iPatch® Upgrade Kit, PATCHMAX® Panel, 2U, 24 port, 10 pack	2.53E+00	2.03E-13	1.75E-02	5.99E-04	1.47E-01	3.94E+00

Product ID	A4	A5	B6	C2	C3	C4	Total
760202630	2.80E-02	3.67E-02	2.53E-01	4.58E-03	1.69E-02	4.44E-04	2.87E+00
760202648	5.60E-02	7.34E-02	5.06E-01	9.16E-03	3.38E-02	8.88E-04	5.74E+00
760198747	2.75E-02	3.67E-02	2.47E-01	4.58E-03	1.69E-02	4.44E-04	2.85E+00
760198754	5.60E-02	7.34E-02	5.06E-01	9.16E-03	3.38E-02	8.88E-04	5.74E-02
760198762	5.46E-02	4.10E-02	2.53E-01	1.08E-02	5.71E-02	9.54E-04	2.87E+00





# Additional Environmental Information

# **Environmental and Health During Manufacturing**

CommScope values employees' health, safety and well-being. To this end, we maintain a robust companywide 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<sup>™</sup> 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 <u>EHS Policy</u>.

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 <a href="https://www.commscope.com/corporate-responsibility-and-sustainability/">https://www.commscope.com/corporate-responsibility-and-sustainability/</a>.

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:

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

#### **Further Information**

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SYSTIMAX<sup>®</sup> 360<sup>™</sup> iPatch<sup>®</sup> Upgrade Kit Telecom Accessories



# 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.





# Contact Information

# Study Commissioner

For more information, visit our website at <a href="https://www.commscope.com/">https://www.commscope.com/</a>

- Contact customer support for product and technical questions at <u>https://www.commscope.com/contact-us/</u>
- Contact product compliance at productsustainability@commscope.com
- Contact Corporate Responsibility & Sustainability team for sustainability questions at sustainability@commscope.com

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# LCA Practitioner

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