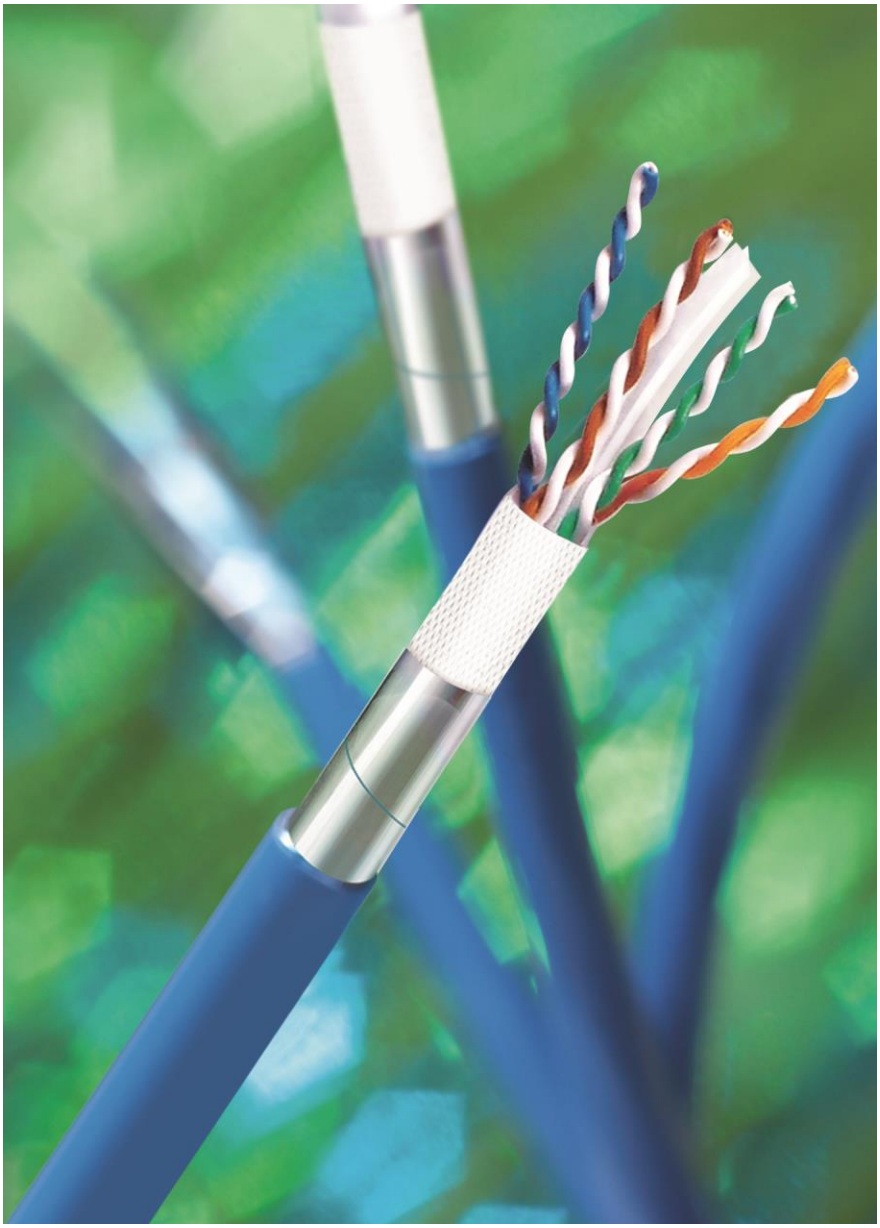
ENVIRONMENTAL PRODUCT DECLARATION

GENERAL CABLE'S GEN*SPEED*® BRAND 4-PAIR COPPER DATA CABLE

PLENUM RATED



All of General Cable's Gen*SPEED*® Brand 4-Pair plenum copper data cables inclusive of CAT 6A, CAT 6, and CAT 5e

General Cable

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability and is committed to producing and marketing products in an environmentally sound and responsible manner. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues. We are dedicated to managing our facilities, processes and materials in a way that meets or exceeds regulatory and other requirements and minimizes risk to our associates, the public and communities where we operate. For a comprehensive account of General Cable's sustainability strategies, please visit: gnca.us/sustainability.

UL CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION UL.COM/EPD

ENVIRONMENTAL PRODUCT DECLARATION

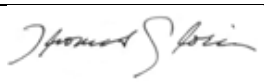
General Cable

Gen*SPEED*® 10 MTP™ Category 6A, Gen*SPEED*® 10,000 Category 6A U/FTP (STP), Gen*SPEED*® 10,000 Category 6A F/UTP (ScTP), Gen*SPEED*® 10,000 Category 6A, Gen*SPEED*® 6500 Premium Category 6, Gen*SPEED*® 6000 Enhanced Category 6, Gen*SPEED*® 6 & Carol Brand Category 6, Gen*SPEED*® 6 Category 6 F/UTP (ScTP), Gen*SPEED*® 5500 Premium Category 5E, Gen*SPEED*® 5350 Category 5E, Gen*SPEED*® 5000 & Carol Brand Category 5E, Gen*SPEED*® 5000 Category 5E F/UTP (ScTP)
4-pair Copper Plenum Data Cable

According to ISO 14025

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025 and ISO 21930. 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.

PROGRAM OPERATOR	UL Environment
DECLARATION HOLDER	General Cable
DECLARATION NUMBER	4787287229.102.1
DECLARED PRODUCT	Plenum Rated 4-Pair Copper Data Cable
REFERENCE PCR	PCR for EPDs: Wire & Cable PCR 2013:1.0
DATE OF ISSUE	January 27, 2016
PERIOD OF VALIDITY	5 years
CONTENTS OF THE DECLARATION	Product definition and information about building physics Information about basic material and the material's origin Description of the product's manufacture Indication of product processing Information about the in-use conditions Life cycle assessment results Testing results and verifications

The PCR review was conducted by:	Environment and Development Foundation PCR Addendum: UL Environment
This declaration was independently verified in accordance with ISO 14025 by Underwriters Laboratories ☒ INTERNAL ☐ EXTERNAL	 Wade Stout, ULE EPM
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	 Thomas Gloria, Life-Cycle Services, LLC

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General Cable

Product Definition and Information

Company Description

General Cable is a General Cable is a global leader in the development, design, manufacture, marketing and distribution of aluminum, copper and fiber optic wire and cable products for the energy, construction, industrial, specialty, and communications markets. General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards. General Cable has accelerated its environmental commitment, addressing its green alternative approach by identifying greener opportunities and promoting green cabling solutions wherever feasible. This includes promoting our existing green products, partnering with key customers in their green endeavors, identifying and providing resources for green product gaps, becoming a member of the United States Green Building Council (USGBC) and participating in collaborative ventures such as the Green Suppliers Network (GSN). For a comprehensive account of General Cable's sustainability strategies, please visit: gnca.us/sustainability.

Product Description

Plenum cables are installed in the plenum spaces of buildings and must meet associated fire safety test standards. In this declaration, thirteen premises 4-pair plenum copper data cable products are covered. All products listed below are UL Listed CMP and have been UL or ETL verified as Category 6A, Category 6, or Category 5e products.

Gen*SPEED*® 10 MTP™ Category 6A, Part number: 7132849
Gen*SPEED* 10 MTP unshielded twisted-pair (UTP), utilizing the patented Mosaic Crossblock™ technology, provides industry-leading protection from alien crosstalk with guaranteed 8 dB of headroom over the ANSI/TIA 568-C.2 standard for alien crosstalk (PSANEXT and PSAACRF). Mosaic Crossblock is a thin metallic tape of segmented sections separated by an insulating layer. Since there is no metal-to-metal contact, there is no path for current to flow longitudinally, and thus, no need for grounding. An ideal product for high-power PoE applications, Gen*SPEED* 10 MTP is UL Listed CMP-LP (0.7A) and able to support up to 140 watts using 50 volts over all four pairs.

Gen*SPEED*® 10,000 Category 6A U/FTP (STP), Part number: 7131786
The individually shielded pairs of Gen*SPEED* 10,000 Category 6A U/FTP (STP) allow for maximum pair separation, increasing key electrical performance parameters. The electromagnetic interference (EMI) protection provided by the shielded design makes this an excellent product for digital video, broadband and baseband analog video applications.

Gen*SPEED*® 10,000 Category 6A F/UTP (ScTP), Part number: 7131586
Gen*SPEED* 10,000 Category 6A F/UTP is an overall shielded cable, requiring grounding and providing 6 dB of guaranteed headroom over the ANSI/TIA 568-C.2 standard for alien crosstalk (PSANEXT and PSAACRF). The internal separator optimizes internal pair geometry to yield superior electrical performance while maintaining flexibility. Rated to 90°C for greater protection against increased operating temperatures, Gen*SPEED* 10,000 F/UTP is UL Listed CMP-LP (0.7A) and able to support PoE applications up to 140 watts using 50 volts over four pairs.

Gen*SPEED*® 10,000 Category 6A, Part number: 7131819
This Category 6A standards-compliant cable utilizes an innovative T-Top crossweb which locks the pairs into a systematic orientation within the cable providing superior internal electrical characteristics. The AirES jacket provides flexibility and maximum separation of pairs from cable to cable for consistent alien crosstalk (PSANEXT and PSAACRF) performance.

Gen*SPEED*® 6500 Premium Category 6, Part number: 7131970
Designed and engineered with precision balance, Gen*SPEED* 6500 utilizes an improved internal separator to allow for more pair separation.With performance guaranteed to 350 MHz, this product provides 7 dB of headroom over ANSI/TIA 568-C.2 standard for internal crosstalk. Rated to 90°C for greater protection against increased operating temperatures, Gen*SPEED* 6500 is UL Listed CMP-LP (0.6A) and able to support PoE applications up to 120 watts

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using 50 volts over four pairs.

Gen*SPEED*® 6000 Enhanced Category 6, Part number: 7131900
Optimally balanced, Gen*SPEED* 6000 utilizes an innovative crossweb design allowing for maximum pair separation. With performance guaranteed to 350 MHz, this product provides 5 dB of headroom over the ANSI/TIA 568-C.2 standard for internal crosstalk. Rated to 90°C for greater protection against increased operating temperatures, Gen*SPEED* 6000 is UL Listed CMP-LP (0.5A) and able to suport PoE applications up to 100 watts using 50 volts over four pairs.

Gen*SPEED*® 6 & Carol® Brand Category 6, Part number: 7131800
Standards-compliant with performance guaranteed to 350 MHz, Gen*SPEED* 6 Category 6 utilizes 23 AWG copper and a unique separator design engineered for consistent electrical performance. Rated to 90°C for greater protection against increased operating temperatures, Gen*SPEED* 6 is UL Listed CMP-LP (0.5A) and able to support PoE applications up to 100 watts using 50 volts over four pairs.

Gen*SPEED*® 6 Category 6 F/UTP (ScTP), Part number: 6131785
This Category 6 standards-compliant cable employs a foil shield to reduce electromagnetic interference (EMI) for optimal performance. Rated to 90°C for greater protection against increased operating temperatures,Gen*SPEED* 6 F/UTP is UL Listed CMP-LP (0.7A) and able to support PoE applications up to 140 watts using 50 volts over four pairs.

Gen*SPEED*® 5500 Premium Category 5E, Part number: 6131278
With performance guaranteed to 350 MHz, Gen*SPEED* 5500 ensures increased headroom for future applications, lower bit-error rates and higher signal transmission quality while also providing enhanced signal-to-noise ratio for improved bit-error rate.

Gen*SPEED*® 5350 Enhanced Category 5E, Part number: 6131690
With performance guaranteed to 350 MHz, Gen*SPEED* 5350 features a 24 AWG design and ensures headroom over the ANSI/TIA 568-C.2 performance standard.

Gen*SPEED*® 5000 Category 5E, Part number: 5131278E
Standards-compliant with performance guaranteed to 200 MHz, Gen*SPEED* 5000 is engineered to provide stable and continuous performance.

Gen*SPEED*® 5000 Category 5E F/UTP (ScTP), Part number: 2131611E
Standards–compliant, Gen*SPEED* 5000 F/UTPfeatures a foil-shield for reduced electromagnetic interference (EMI) and optimal performance.

Manufacturing Locations

These data cables are manufactured in Lawrenceburg, Kentucky and Jackson, Tennessee. Primary data for the life cycle assessment has been provided by each of these facilities and a weighted average has been conducted for each product.

Applications and Uses

These products are used in the plenum spaces of buildings. Applications for the plenum products include: IEEE 802.3: 10 through 10GBASE-T LAN and WLAN applications; Power over Ethernet – 802.3AF (PoE), 802.3at (PoE+); HDBT and digital video; broadband and baseband analog video; CDDI, Token Ring, ATM.

Material Inputs

The raw materials for these plenum data cables are listed in Table 1. Table 2 details the average packaging materials associated with with each product.

General Cable

Material (lb/100ft)	GenSPEED 5350 Enhanced CAT 5e	GenSPEED 5000 CAT 5e	GenSPEED 6 CAT 6 F/UTP (ScTP)	GenSPEED 6 CAT 6	GenSPEED 10 MTP CAT 6A	GenSPEED 5500 Premium CAT 5e	GenSPEED 6000 Enhanced CAT 6	GenSPEED 6500 Premium CAT 6	GenSPEED 10,000 CAT 6A F/UTP (ScTP)	GenSPEED 5000 CAT 5e F/UTP (ScTP)	GenSPEED 10,000 CAT 6A U/FTP (STP)	GenSPEED 10,000 CAT 6A
Copper	1.2	1.0	1.5	1.2	1.4	1.1	1.2	1.4	1.5	1.1	1.4	1.4
FEP Compound	0.5	0.4	1.1	0.5	1.0	0.5	0.5	0.6	1.1	0.8	1.7	1.1
PET	-	-	0.8	<0.1	0.6	-	0.1	<0.1	0.8	0.2	0.6	-
Tin	-	-	0.1	-	-	-	-	-	0.1	0.1	-	-
PVC Compound	0.7	0.6	1.0	0.6	0.9	0.5	0.7	0.8	1.0	1.0	1.5	1.9
Colorant	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total	2.4	2.1	4.6	2.3	3.9	2.1	2.6	2.9	4.6	3.3	5.3	4.3

Table 1: Material Inputs for Plenum Copper Data Cables

Material (lb/100ft)	GenSPEED 5350 Enhanced CAT 5e	GenSPEED 5000 CAT 5e	GenSPEED 6 CAT 6 F/UTP (ScTP)	GenSPEED 6 CAT 6	GenSPEED 10 MTP CAT 6A	GenSPEED 5500 Premium CAT 5e	GenSPEED 6000 Enhanced CAT 6	GenSPEED 6500 Premium CAT 6	GenSPEED 10,000 CAT 6A F/UTP (ScTP)	GenSPEED 5000 CAT 5e F/UTP (ScTP)	GenSPEED 10,000 CAT 6A U/FTP (STP)	GenSPEED 10,000 CAT 6A
Cardboard	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Plastic Spool	0.2	0.2	0.3	0.3	0.4	0.2	0.3	0.3	0.4	0.4	0.4	0.4
Wood Pallet	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.4	0.4	0.4	0.4
Shrinkwrap	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 2: Average Packaging Material Inputs

Manufacturing Process

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

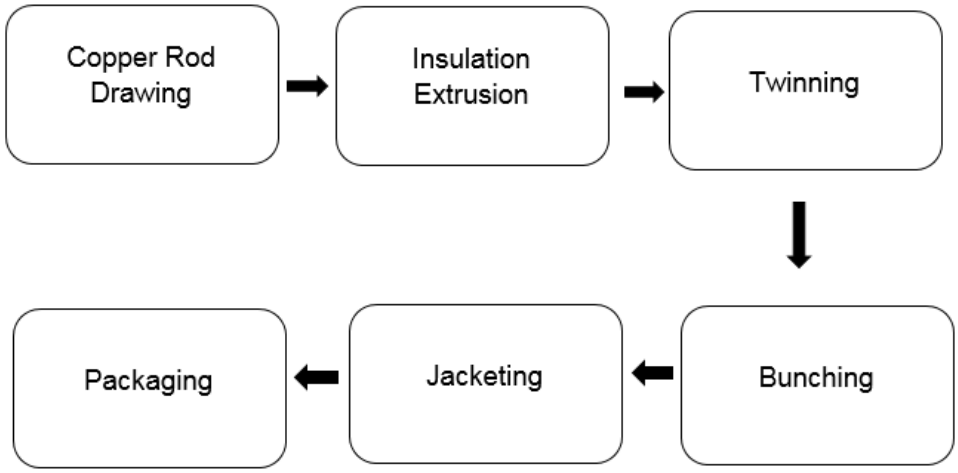

Figure 1: Manufacturing Process Flow of Copper Data Cable

Life Cycle Assessment Description

Functional Unit

Environmental impacts are reported per functional unit of a product and the functional unit is the basis for comparison in an LCA. For copper data cable, the functional unit is 100ft of cable.

Life Cycle Stages Assessed

Life Cycle Boundary	EPD Life Cycle Stage
General Cable Plenum Cable Business-to-Business	Raw Material Acquisition
	Manufacturing
	Packaging/Storage
General Cable Plenum Cable Business-to-Consumer	Marketing and Distribution
	Installation and Use
	Waste Disposal

Table 3: Life Cycle Stages Assessed

System Boundary

This project considers the life cycle activities from resource extraction through installation and end-of-life effects. The boundary covers raw material acquisition, manufacturing, marketing, use and waste disposal as seen in Figure 3.

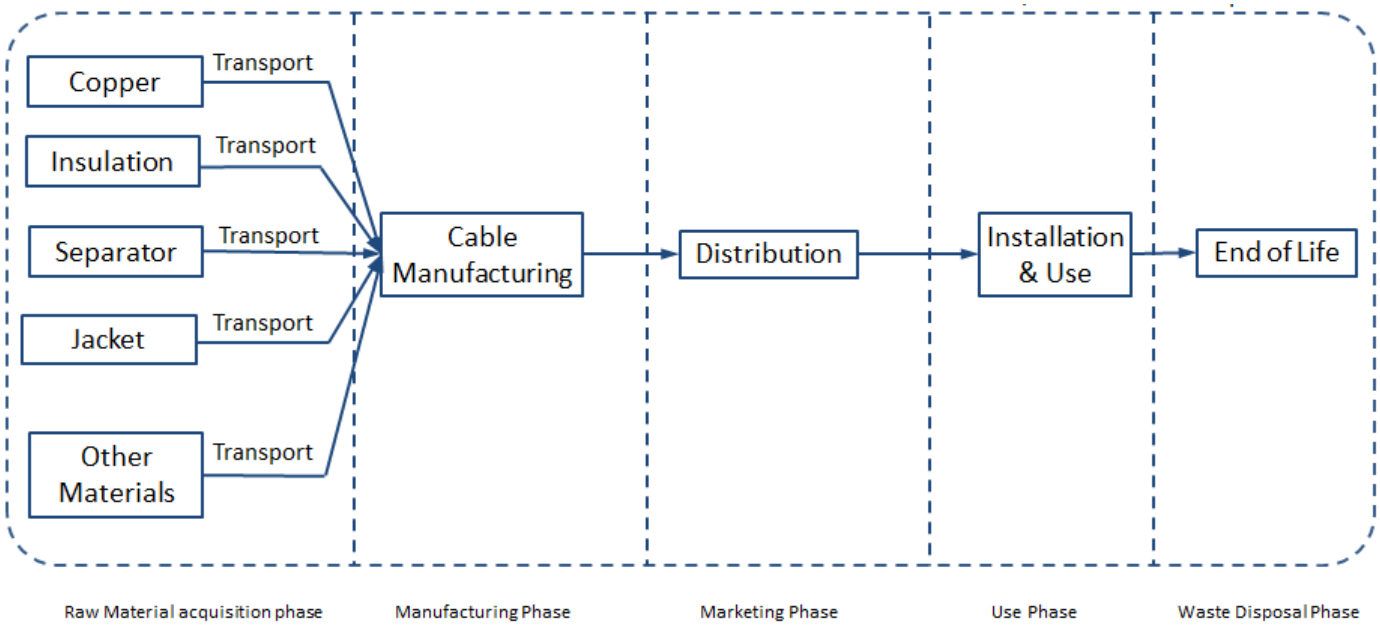

Figure 2: System Boundary

Allocation

Allocation for manufacturing energy, water, and waste items was conducted per length of production based on manufacturing zones of each facility.

Cut-off Criteria

For any impact category, should the sum of various impacts from a specific process/activity be less than 1% of the impact equivalent in that category, the process/activity may be neglected during the inventory analysis. Nonetheless, the accumulated impact of neglected process/activity may not exceed 5%. Components and materials omitted from the LCA shall be documented.

This EPD is in compliance with the cut-off criteria. Components and materials omitted from the LCA shall be documented and include installation energy from signal testing devices in the installation of data communication cable. Capital items for the production processes (machines, buildings, etc.) were not taken into consideration.

Period under Consideration

Primary data used refer to the production processes of the two manufacturing facilities and were derived from calendar year 2014.

Software and Background Data

SimaPro v8.02 Software System for Life Cycle Engineering, an internationally recognized LCA modeling software program, was used for life cycle impact assessment modeling. Background and secondary datasets were modeled using the US LCI database, developed by the National Renewable Energy Laboratory, as well as the ecoinvent v3

database, which is developed by the Swiss Centre for Life Cycle Inventories. FEP material impact data was obtained from an LCA on data cable conducted for the Environmental Protection Agency.

Marketing and Distribution

The plenum cable products are distributed globally, but primarily throughout the United States and Canada. Final plenum copper data cable products were modeled as being shipped 1000 miles by truck, based on the location of General Cable manufacturing locations and distribution centers.

Transportation

General Cable provided resource transportation mode and location data to support the calculation of raw material transportation flows. The transportation LCI data from the US LCI database (kg-km basis) were used to develop the resource transportation LCI profile.

Installation and Use Stage

A scrap rate of 5% was assumed in the installation of the product in the use stage for this study. This rate was based on the expertise of General Cable. Installers routinely use signal testing devices to ensure cable has been installed properly; however, this device has negligible energy consumption compared to the rest of the installation and life cycle impacts and so was excluded from the study as allowed by the cut-off criteria.

The lifetimes of these products are widely variable and most often data cable is replaced due to increased bandwith and data speed requirements, and not because of product performance or degradation. Copper data cable is a passive product after installation and during the use stage, meaning no energy is consumed nor additional maintenance is requried during the products' use. Therefore, no use stage impacts were measured, and thus none are presented in these results.

End-of-Life

A distance of 20 miles to the recycling facility was assumed for products at the end-of-life. A 95% recycling rate was assumed with the remaining 5% being disposed as the average US municipal solid waste disposition, as cited in a study conducted by DuPont (Krieger, 2007). The US disposition rates of 82% landfill and 18% incineration were assumed for the remaining 5% of product material. The cut-off methodology (also known as the recycled content method) was used for any materials that were sent to recycling such as scrap and the end-of-life disposition. This methodology assumes the processing of the recycled material at the recycler will be applied to the next product life cycle. Data not available in life cycle databases used models found in the Waste Reduction Model (WARM), developed by the US EPA.

General Cable

Life Cycle Inventory

Energy Use

Life Cycle Stage	GenSPEED 10 MTP CAT 6A	GenSPEED 10,000 CAT 6A U/FTP (STP)	GenSPEED 10,000 CAT 6A F/UTP (ScTP)	GenSPEED 10,000 CAT 6A	GenSPEED 6500 Premium CAT 6	GenSPEED 6000 Enhanced CAT 6	GenSPEED 6 & Carol Brand CAT 6	GenSPEED 6 CAT 6 F/UTP (ScTP)	GenSPEED 5500 Premium CAT 5e	GenSPEED 5350 Enhanced CAT 5e	GenSPEED 5000 and Carol Brand CAT 5e	GenSPEED 5000 CAT 5e F/UTP (ScTP)
Raw Material Acquisition	201	310	244	223	159	145	136	263	125	138	115	176
Manufacturing	36.9	38.3	38.3	38.3	33.8	34.3	34.4	34.3	31.0	31.5	31.5	38.3
Marketing	14.5	19.9	17.3	16.2	11.0	9.6	8.8	17.3	8.0	9.1	7.7	12.3
Use	12.6	18.4	15.0	13.9	10.2	9.4	9.0	15.7	8.2	8.9	7.7	11.3
Waste Disposal	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Cradle-to-Grave	266	387	315	292	214	198	188	331	172	188	162	238

Table 4: Cradle-to-Grave Cumulative Energy Demand (MJ) per 100 feet of Cable

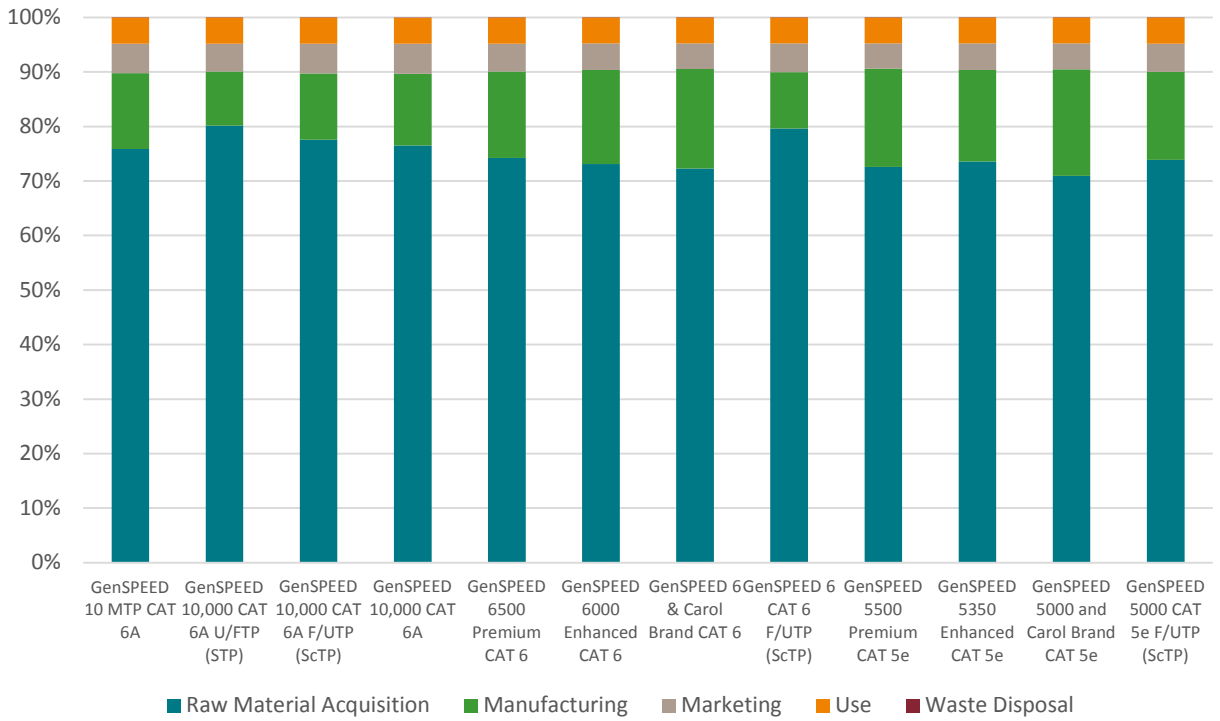

Figure 3: Cradle-to-Grave Cumulative Energy Demand

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Waste Management

Life Cycle Stage	GenSPEED 10 MTP CAT 6A	GenSPEED 10,000 CAT 6A U/FTP (STP)	GenSPEED 10,000 CAT 6A F/UTP (ScTP)	GenSPEED 10,000 CAT 6A	GenSPEED 6500 Premium CAT 6	GenSPEED 6000 Enhanced CAT 6	GenSPEED 6 & Carol Brand CAT 6	GenSPEED 6 CAT 6 F/UTP (ScTP)	GenSPEED 5500 Premium CAT 5e	GenSPEED 5350 Enhanced CAT 5e	GenSPEED 5000 and Carol Brand CAT 5e	GenSPEED 5000 CAT 5e F/UTP (ScTP)
Incineration (with and without energy recovery)	3.6E-04	5.9E-04	4.1E-04	7.3E-04	3.2E-04	2.6E-04	2.2E-04	4.1E-04	2.0E-04	2.5E-04	2.3E-04	3.9E-04
Landfill (nonhazardous waste)	2.1E+00	2.5E+00	2.4E+00	2.1E+00	2.0E+00	1.7E+00	1.6E+00	2.5E+00	1.5E+00	1.7E+00	1.4E+00	1.8E+00
Hazardous Waste	3.4E-02	5.2E-02	3.3E-02	3.4E-02	1.8E-02	1.6E-02	1.5E-02	3.2E-02	1.3E-02	1.4E-02	1.3E-02	3.2E-02
Landfill Avoidance (recycling)	1.1E+00	9.6E-01	2.0E+00	1.0E+00	1.7E+00	9.6E-01	1.2E+00	1.3E+00	2.0E+00	1.5E+00	2.3E+00	1.9E+00

Table 5: Cradle-to-Grave Waste (kg) per 100ft of Cable

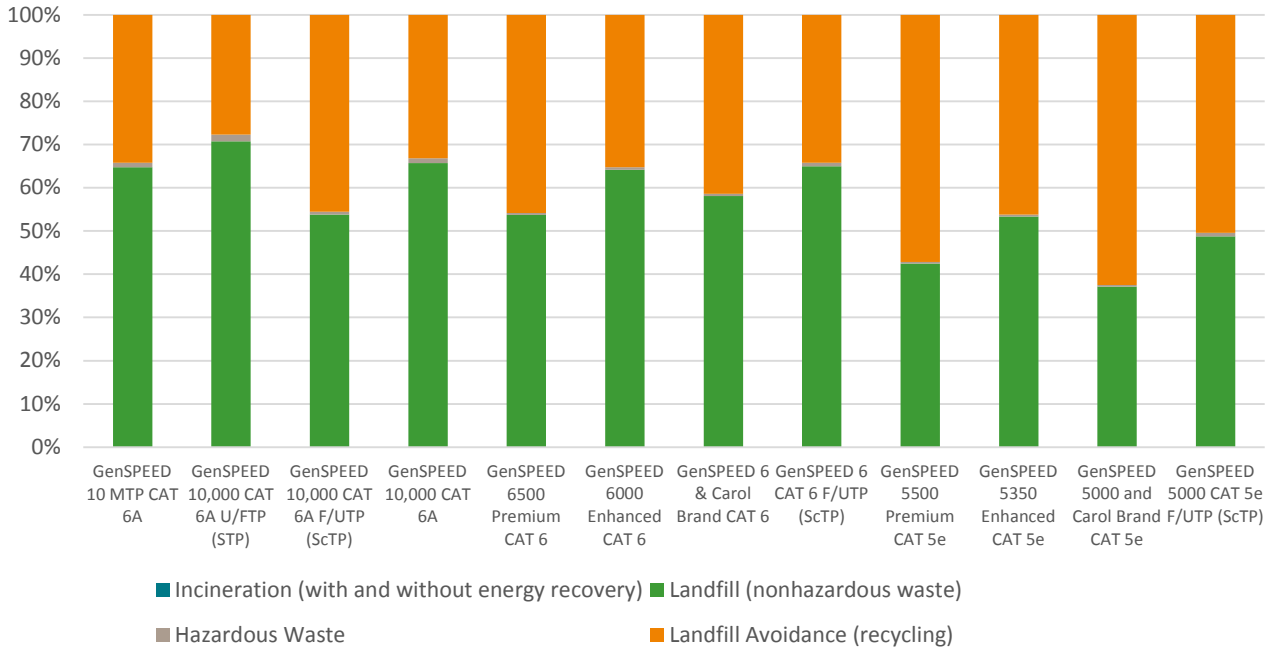

Figure 4: Cradle-to-Grave Waste

Life Cycle Impact Assessment

The environmental impacts listed below were assessed throughout the life cycle of the plenum data cable products as defined above, per 100 feet of cable. The environmental impacts were analyzed using TRACI 2.1 methodology.

General Cable

Impact Category	GenSPEED 10 MTP CAT 6A						GenSPEED 10,000 CAT 6A U/FTP (STP)						GenSPEED 10,000 CAT 6A F/UTP (ScTP)					
	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave
Global Warming (kg CO_2 eq)	1.2E+01	1.9E+00	1.1E+00	7.4E-01	3.1E-02	1.5E+01	1.8E+01	2.0E+00	1.5E+00	1.1E+00	4.5E-02	2.2E+01	1.4E+01	2.0E+00	1.3E+00	8.7E-01	3.8E-02	1.8E+01
Acidification (kg SO_2 eq)	3.1E-01	1.7E-02	6.3E-03	1.7E-02	5.0E-05	3.5E-01	3.6E-01	1.8E-02	8.7E-03	1.9E-02	7.6E-05	4.0E-01	3.6E-01	1.8E-02	7.5E-03	1.9E-02	5.9E-05	4.0E-01
Eutrophication (kg N eq)	1.3E+00	6.6E-04	4.4E-04	6.4E-02	2.6E-05	1.3E+00	1.4E+00	8.4E-04	6.0E-04	7.2E-02	4.0E-05	1.5E+00	1.5E+00	8.4E-04	5.2E-04	7.4E-02	3.0E-05	1.6E+00
Smog (kg O_3 eq)	1.6E+00	1.2E-01	1.7E-01	9.7E-02	9.9E-04	2.0E+00	1.9E+00	1.3E-01	2.4E-01	1.1E-01	1.4E-03	2.4E+00	1.9E+00	1.3E-01	2.1E-01	1.1E-01	1.2E-03	2.3E+00
Ozone Depletion (kg CFC-11 eq)	6.5E-05	4.8E-08	1.7E-08	3.2E-06	5.3E-10	6.8E-05	1.4E-04	5.4E-08	2.4E-08	6.8E-06	8.0E-10	1.4E-04	9.1E-05	5.4E-08	2.1E-08	4.6E-06	6.2E-10	9.6E-05

Impact Category	GenSPEED 10,000 CAT 6A						GenSPEED 6500 Premium CAT 6						GenSPEED 6000 Enhanced CAT 6					
	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave
Global Warming (kg CO_2 eq)	1.3E+01	2.0E+00	1.2E+00	7.9E-01	3.5E-02	1.7E+01	9.2E+00	1.8E+00	8.1E-01	5.9E-01	1.9E-02	1.2E+01	8.5E+00	1.9E+00	7.0E-01	5.5E-01	1.7E-02	1.2E+01
Acidification (kg SO_2 eq)	3.1E-01	1.8E-02	7.1E-03	1.7E-02	7.5E-05	3.5E-01	3.1E-01	1.6E-02	4.8E-03	1.7E-02	4.1E-05	3.5E-01	2.7E-01	1.6E-02	4.2E-03	1.4E-02	3.5E-05	3.0E-01
Eutrophication (kg N eq)	1.2E+00	8.4E-04	4.9E-04	6.2E-02	3.8E-05	1.3E+00	1.3E+00	7.4E-04	3.3E-04	6.6E-02	1.9E-05	1.4E+00	1.1E+00	8.1E-04	2.9E-04	5.6E-02	1.6E-05	1.2E+00
Smog (kg O_3 eq)	1.6E+00	1.3E-01	1.9E-01	9.7E-02	1.3E-03	2.0E+00	1.6E+00	1.2E-01	1.3E-01	9.2E-02	7.8E-04	1.9E+00	1.4E+00	1.2E-01	1.1E-01	8.0E-02	6.7E-04	1.7E+00
Ozone Depletion (kg CFC-11 eq)	8.7E-05	5.4E-08	2.0E-08	4.3E-06	7.8E-10	9.1E-05	4.5E-05	4.5E-08	1.3E-08	2.2E-06	4.4E-10	4.7E-05	4.4E-05	4.7E-08	1.2E-08	2.2E-06	3.7E-10	4.6E-05

Impact Category	GenSPEED 6 & Carol Brand CAT 6						GenSPEED 6 CAT 6 F/UTP (ScTP)						GenSPEED 5500 Premium CAT 5e					
	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave
Global Warming (kg CO_2 eq)	7.9E+00	1.6E+00	2.7E-01	6.4E-01	5.3E-01	1.1E+01	1.5E+01	1.9E+00	1.3E+00	9.2E-01	3.7E-02	1.9E+01	7.3E+00	1.8E+00	5.9E-01	4.8E-01	1.4E-02	1.0E+01
Acidification (kg SO_2 eq)	2.5E-01	1.4E-02	2.1E-03	3.8E-03	1.4E-02	2.9E-01	3.6E-01	1.6E-02	7.5E-03	1.9E-02	5.9E-05	4.1E-01	2.3E-01	1.5E-02	3.5E-03	1.3E-02	2.8E-05	2.6E-01
Eutrophication (kg N eq)	1.1E+00	7.5E-04	8.6E-05	2.6E-04	5.3E-02	1.1E+00	1.5E+00	8.1E-04	5.2E-04	7.4E-02	3.0E-05	1.6E+00	9.9E-01	7.6E-04	2.4E-04	4.9E-02	1.3E-05	1.0E+00
Smog (kg O_3 eq)	1.3E+00	1.0E-01	1.7E-02	1.0E-01	7.6E-02	1.6E+00	2.0E+00	1.2E-01	2.1E-01	1.2E-01	1.2E-03	2.4E+00	1.2E+00	1.1E-01	9.5E-02	7.0E-02	5.5E-04	1.5E+00
Ozone Depletion (kg CFC-11 eq)	4.3E-05	4.6E-08	4.4E-10	1.1E-08	2.2E-06	4.5E-05	9.1E-05	4.7E-08	2.1E-08	4.6E-06	6.2E-10	9.6E-05	4.2E-05	3.9E-08	9.6E-09	2.1E-06	3.0E-10	4.4E-05

Impact Category	GenSPEED 5350 Enhanced CAT 5e						GenSPEED 5000 and Carol Brand CAT 5e						GenSPEED 5000 CAT 5e F/UTP (ScTP)					
	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave	Raw Material	Manufacturing	Marketing	Use	Waste Disposal	Cradle to Grave
Global Warming (kg CO_2 eq)	8.0E+00	1.9E+00	6.7E-01	5.3E-01	1.6E-02	1.1E+01	6.6E+00	1.9E+00	5.6E-01	4.5E-01	1.3E-02	9.5E+00	1.0E+01	2.0E+00	9.1E-01	6.5E-01	2.6E-02	1.4E+01
Acidification (kg SO_2 eq)	2.6E-01	1.6E-02	4.0E-03	1.4E-02	3.3E-05	2.9E-01	2.1E-01	1.6E-02	3.3E-03	1.2E-02	2.9E-05	2.4E-01	2.7E-01	1.8E-02	5.4E-03	1.5E-02	4.7E-05	3.1E-01
Eutrophication (kg N eq)	1.1E+00	9.0E-04	2.7E-04	5.5E-02	1.5E-05	1.2E+00	8.9E-01	9.0E-04	2.3E-04	4.5E-02	1.3E-05	9.4E-01	1.1E+00	8.4E-04	3.7E-04	5.7E-02	2.4E-05	1.2E+00
Smog (kg O_3 eq)	1.3E+00	1.2E-01	1.1E-01	7.8E-02	6.4E-04	1.6E+00	1.1E+00	1.2E-01	9.1E-02	6.5E-02	5.5E-04	1.4E+00	1.4E+00	1.3E-01	1.5E-01	8.5E-02	8.9E-04	1.8E+00
Ozone Depletion (kg CFC-11 eq)	4.3E-05	3.6E-08	1.1E-08	2.2E-06	3.6E-10	4.5E-05	3.6E-05	3.6E-08	9.2E-09	1.8E-06	3.1E-10	3.8E-05	6.2E-05	5.4E-08	1.5E-08	3.1E-06	5.0E-10	6.5E-05

Table 6: Cradle-to-Grave Life Cycle Impact Assessment Results per 100 ft of Cable

Environment

General Cable

Optional Environmental Information

Organizational Third-Party Certification

General Cable is a member of the US Green Building Council, The Green Suppliers Network, and Agenda 21 (Barcelona). In addition, 21 manufacturing facilities around the world are ISO 14001 certified, while another 20 are ISO 14001 equivalent (policies and procedures implemented but not yet certified).

References

- ANSI/TIA-568-C.2 Commercial Building Telecommunications Cabling
- C22.2 NO. 214-08 (R2013) - Communications cables (Bi-national standard, with UL 444)
- ISO 21930: Sustainability in building construction – Environmental declaration of building products
- EPA, Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI)
- EPA, Wire and Cable Insulation and Jacketing: Life-Cycle Assessments for Selected Applications, June 2008, EPA 744-R-08-001
- FTC Part 260, Green guides
- (ILCD, 2010) Joint Research Commission, 2010, ILCD Handbook: General Guide for Life Cycle Assessment
- Intergovernmental Panel on Climate Change (IPCC)
- ISO 14025:2006 *Environmental labels and declarations – Type III environmental declarations – Principles and Procedures*
- ISO 14040:2006 *Environmental management - Life cycle assessment – Principles and framework*
- ISO 14044:2006 *Environmental management - Life cycle assessment – Requirements and guidelines*
- NFPA 262: Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces
- NFPA 70®: National Electrical Code
- UL 44 Standard Thermoset-Insulated Wires and Cables
- UL 1666 Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts
- USEPA Waste Reduction Model (WARM)
- Krieger, T. et al. *New Fire Hazard and Environmental Burden Evaluations of Electrical Cable Installations Utilizing ISO 14040 Environmental Methodologies*. DuPont. November 10, 2007.

LCA Development

This EPD and corresponding LCA were prepared by Sustainable Solutions Corporation of Royersford, Pennsylvania.

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