

Electronic Approvals

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1.0 Purpose

- 1.1 Establish and communicate the guidelines for product compliance specifications for purchased materials and products to suppliers and CommScope R&D/Engineering.
- 1.2 To ensure all materials and products are compliant with global environmental product compliance regulations.
- 1.3 To support continuous improvement through the product life cycle.

2.0 Scope

- 2.1 The following requirements detail the general environmental product compliance specifications for all raw materials, parts, assemblies, sub-assemblies, contract manufactured end item saleable products and private label products purchased by CommScope. Additional compliance requirements may be required. These requirements will be defined by other documents, including but not limited to, the purchase order and other documents referenced in the purchase order. This document herein is to be used in conjunction with other CommScope specifications as detailed by the engineering team.
- 2.2 CommScope understands the need to address the environmental impacts of its products and services. We recognize that each product has an environmental footprint, whether it is the energy used to operate a base station antenna or the materials required to package accessories. CommScope encourages its product development teams to take a holistic approach to design, considering sustainability throughout the lifecycle of our products, including the design and manufacturing process, product installation and use, and end of life.

Drawings and documents may reference old specifications. Below is the cross reference of engineering environmental product compliance cross references. The supplier is responsible for meeting all requirements of this specification “Environmental Product Compliance Specification for Purchased Materials and Products”. All other referenced environmental product compliance specifications including those listed below are obsolete and shall not be followed.

Group	Obsolete Reference Number	Obsolete Reference Name
Enterprise Apparatus	EMS0092	Environmental Specifications for Enterprise Apparatus Products
Active Wireless Products (AWP)	A996-0182	Lead Free (RoHS) Procedure

3.0 Related Documentation, Quality System Forms, Data and Records

3.1 Related Documentation

Number	Title
ISO 9001	Quality Management System (Latest Version)
TL 9000	Telecom Quality Management System (Where Applicable)
ISO 14001	Environmental Management System (Latest Version)
CPR2001	Global EHS Vision and Policy Statement (Refer to Entropy)
CS-EPC-1000	Environmental Product Compliance (EPC) - Policy
CS-EPC-1001	Environmental Product Compliance (EPC) – Conflict Minerals – Policy
CS-EPC-2000	Environmental Product Compliance (EPC) – Due Diligence Process for Reporting of Conflict Minerals – Procedure
CS-EPC-2001	Environmental Product Compliance (EPC) – Specification for Materials and Products- Procedure
CS-EPC-2001-01	Environmental Product Compliance (EPC) - Restricted Substance List
CS-EPC-3001	Environmental Product Compliance (EPC) – Data Collection and Supplier Escalation Work Instruction

Number	Title
CS-EPC-3002	Environmental Product Compliance (EPC) – Engineering – Work Instruction
CS-QM-1000	Quality Manual

3.2 Quality System Forms, Data and Records

Number	Title
CS-EPC-3001-01	Environmental Product Compliance (EPC) –Supplier Risk Assessment Questionnaire - Form
CS-EPC-3002-01	Environmental Product Compliance (EPC) – New Product Introduction (NPI) Checklist – Form

4.0 Accountability

4.1 Environmental Product Compliance Team

- 4.1.1 The Product Safety and Compliance Manager is responsible for the content of this specification.
- 4.1.2 The Environmental Product Compliance Team with the help of Engineering and Procurement are responsible for obtaining the necessary documentation from suppliers to substantiate compliance.
- 4.1.3 The Environmental Product Compliance Engineer is responsible for handling all environmental product compliance documentation from suppliers.

4.2 Engineering

- 4.2.1 Engineering will reference this procedure on all new relevant documents and documents that are being updated.
- 4.2.2 Engineering shall ensure the specification of the materials and products meets the requirements herein and references this document in relevant communication with the supplier.
- 4.2.3 Engineering, with the guidance from the Product Compliance Team, is responsible for ensuring environmental marking and labeling of products meets the requirements herein.
- 4.2.4 Engineering is responsible for notifying Product Compliance of any non-compliant materials/products and substantive changes to materials or products that could render a material/product to be non-compliant.

4.3 Procurement

- 4.3.1 Procurement is responsible for ensuring the suppliers of materials and products are aware of this specification.
- 4.3.2 Procurement is responsible to Manage Vendor expectation towards requirements laid down under this specification and follow process under document Environmental Product Compliance (EPC) – Data Collection and Supplier Escalation Work Instruction (CS-EPC-3001) during non-compliance of the same.

5.0 Definitions

Term	Definition
Banned Substance	A substance whose intentional use is not permitted in any quantity for all indicated applications is defined as a banned substance. If a threshold value is indicated, it applies only to impurities (not intentionally added) and the amount of the impurity of the substance must be less than the threshold value.
Conflict Minerals	The term "conflict minerals" from section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Conflict Minerals Rule, 17 CFR Parts 240 and 249b is defined as columbite-tantalite, also known as coltan (from which tantalum is derived); cassiterite (tin); gold; wolframite (tungsten); or their derivatives; or any other mineral or its derivatives determined by the U.S. Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country.
Contract Manufacturer	An external company that manufactures products based on CommScope design. Their suppliers are predominately determined by CommScope, but some items are sourced by the supplier. CommScope would own the products' intellectual property.
Declarable Substance	A substance that may be used in materials, components, and products however, CommScope must be notified regarding the substance and the concentration.

Term	Definition
Electrical and Electronic Equipment or 'EEE'	Referred to in the RoHS Recast Directive 2011/65/EU, Electrical and Electronic Equipment is defined as which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1 000 volts for alternating current and 1 500 volts for direct current; All cable and antennas are EEE. Modular cabling systems for voice, data and video applications fall under EEE in Category 3 IT and telecommunication equipment. See RoHS cable flowchart in the section 7.0 for additional clarifications.
Electrical and Electronic Products (EEPs)	Referred to in Standard of the Electronics Industry of the People's Republic of China SJ/T 11364 – 2014, Electrical and Electronic Products is defined as equipment or its accessories which work with a voltage rating not exceeding 1500 volts for direct current and 1,000 volts for alternating current and function by means of current or electromagnetic fields and generate, transmit and measure such currents and electromagnetic fields.
Environmental Protection Use Period (EPuP)	The EPuP is the period of time before any of the China RoHS substances are likely to leak out of the product, causing possible harm to health and the environment. The EPuP applies when one or more of the restricted substances are present in the product above the threshold concentration levels. This term is also called Environmentally Friendly Use Period (EFUP).
Homogeneous Material	One material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjoined or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.
Private Label Manufacturer	An external company that manufactures products that CommScope sells under the CommScope label. The external company owns the design of the product and determines the supply chain.
REACH	Referred to as Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). This European Union Regulation (EC) No 1907/2006 restricts the use of certain substances on the candidate SVHC list above 1000 ppm and bans the use of Annex XIV substances for all articles.
Restricted Substance	A substance that is prohibited for intentional use unless expressly stipulated otherwise in a regulatory exemption or by written approval from CommScope. If a threshold value is indicated, it applies only to impurities (not intentionally added) and the amount of the impurity of the substance must be less than the threshold value.
RoHS	Referred to as Restriction of Hazardous Substances. This is an European Union Directive 2011/65/EU that bans specific substances above certain concentration thresholds used in electrical and electronic equipment.
Banned Substance	A substance whose intentional use is not permitted in any quantity for all indicated applications is defined as a banned substance. If a threshold value is indicated, it applies only to impurities (not intentionally added) and the amount of the impurity of the substance must be less than the threshold value.
Conflict Minerals	The term "conflict minerals" from section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Conflict Minerals Rule, 17 CFR Parts 240 and 249b is defined as columbite-tantalite, also known as coltan (from which tantalum is derived); cassiterite (tin); gold; wolframite (tungsten); or their derivatives; or any other mineral or its derivatives determined by the U.S. Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country.
Contract Manufacturer	An external company that manufactures products based on CommScope design. Their suppliers are predominately determined by CommScope, but some items are sourced by the supplier. CommScope would own the products' intellectual property.

6.0 Description

6.1 Global Requirements

Suppliers of all raw materials, parts, assemblies, sub-assemblies, contract manufactured end item saleable products and private label products shall comply with the requirements herein regardless of the location of manufacture and where the products are intended to be used or sold.

Yet, at the material level, all raw materials, parts, assemblies, sub-assemblies, and products shall not contain the RoHS substances above the threshold levels at the homogeneous level or shall be RoHS compliant by exemption and comply with REACH SVHC notifications requirements, and meet REACH Annex XIV and REACH Annex XVII requirements. In addition, suppliers shall certify to full compliance with all applicable standards of the country, state, or province in which the raw materials, parts, assemblies, sub-assemblies, and products are procured, manufactured, transported and shipped for use to the CommScope Inc. manufacturing facility and to

CommScope's customer. Where CommScope is indicated throughout this document, the CommScope brand and all subsidiary brands are implied.

6.2 Supplier Data Collection

Suppliers of materials and parts to CommScope shall provide a declaration or statement of compliance in a manner prescribed by CommScope through [Product Stewardship Network](#) (PSN) or another means, certifying the supplied materials and parts are in compliance with the requirements. It is also the responsibility of the supplier to update this compliance info if the stated compliance status will be changed.

6.3 RoHS II

6.3.1 Compliance

The supplier's raw materials, parts, assemblies, sub-assemblies, and products shall not contain any of the substances at the homogeneous level above the threshold concentration levels listed in Annex II unless a valid exemption exists, or amendments thereof, of [Directive 2011/65/EU](#) of the European Parliament and of the Council of 8 June, 2011 on the restriction of the use of certain hazardous substances. For the substances with the asterisk* listed after, parts and materials must be compliant from July 22, 2019. The RoHS substance and their respective threshold concentrations levels are the following:

- Lead (1000 ppm, 0.1%),
- Mercury (1000 ppm),
- Hexavalent chromium (1000 ppm, 0.1%),
- Cadmium (100 ppm, 0.01%),
- Polybrominated biphenyls (PBB's) (1000 ppm, 0.1%),
- Polybrominated diphenyl ethers (PBDE's) (1000 ppm, 0.1%),
- Bis-(2-ethylhexyl) phthalate (DEHP) (1000 ppm, 0.1%), *
- Butyl benzyl phthalate (BBP) (1000 ppm, 0.1%), *
- Dibutyl phthalate (DBP) (1000 ppm, 0.1%), *
- Diisobutyl phthalate (DIBP) (1000 ppm, 0.1%)*
- AND any future additional substances and threshold concentration.

6.3.2 Documentation

A supplier of raw materials, parts, assemblies, and subassemblies shall draw up and provide to CommScope, upon request, and free of charge within two weeks of request a declaration to RoHS II or statement of compliance in the format as requested.

If the supplier acts as a contract manufacturer and sources the supplied materials of an end item salable product, the supplier shall provide a Declaration of Conformity to the RoHS II Directive and the Technical Documentation meeting the standard of Module A of [Decision 768/2008/EC of the European Parliament and of the Council](#) of 9 July 2008 on a common framework for the marketing of products. A contract manufactured product is a product where CommScope owns the design and intellectual property.

If the supplier acts as a manufacturer of a private label product, the supplier shall provide a Declaration of Conformity to the RoHS II Directive. A private label manufactured product is a product where CommScope does not own the design or the intellectual property but brands the product under the CommScope trademark or any of its subsidiary brands. The Declaration of Conformity format can be found in the RoHS II Directive. The private label manufacturer shall hold the Technical Documentation and meet the requirements of 768/2008/EC.

All declarations and statements of compliance shall list the CommScope part number, the supplier part number, description of the material, and shall be dated and signed. If a valid exemption exists, it shall be listed on the documentation provided.

Upon request, the supplier shall complete the CommScope Product Compliance Risk Assessment Questionnaire. This questionnaire shall be completed and returned to productcompliance@commscope.com or by other means as requested. This questionnaire will be used to risk rate the supplier. A low supplier risk rating may result in CommScope requesting laboratory analysis on the supplied raw materials, parts, assemblies, sub-assemblies or products.

6.3.3 Marking

The marking information described in this section applies to products manufactured on CommScope's behalf. This section does not apply to raw materials, parts, assemblies, or sub-assemblies used in CommScope products. RoHS marking includes CE marking of the product as described below. All CommScope raw materials, parts, assemblies, and sub-assemblies are required not to exceed the RoHS substance concentration threshold levels and the marking requirements shall be followed for sale into the European Economic Area (EEA, the 27 Member States of the EU and EFTA countries Iceland, Norway, Liechtenstein), as well as Turkey. Engineering shall determine if the marking requirements need to be met depending on the product's anticipated sales region. If the sales region changes to include the European Union and Turkey, then CE marking requirements must be followed.

Supplier shall ensure all measures necessary so the manufacturing process and its monitoring ensure compliance of the manufactured products with the declaration and Technical Documentation. Therefore, the supplier shall affix the required conformity marking known as CE marking for end item salable products that qualify as electrical and electronic equipment in the meaning of Art. 3(1) RoHS II as defined further below.

It is important to note, that products may be required to meet more than one CE marking directive. The contract manufacturer or private label product manufacturer has the sole responsibility to ensure all requirements are met for any other CE marking directives to which the product is in scope and provide the engineering team the relevant compliance documentation.

If an end item salable product is supplied, the following marking requirements must be met.

- 1) Mark the product with the type, batch, or serial number on the product. If the mark cannot be on the product due to the size or nature of the product, the marking must be on the packaging or accompanying documentation. Model number may be used to meet this requirement. However, more specific numbering should be strongly considered in order to increase the traceability of the product and limit potential recalls to a small number.
- 2) Mark the product with at least one of the following on the product: the manufacturer name, the registered trade name, or registered trade mark. If the mark cannot be on the product due to the size or the nature of the product, the marking must be on the packaging or accompanying documentation. The manufacturer name, registered trade name, or registered trade mark is the name of the organization that manufactures the EEE or has the EEE designed and manufactured or markets the EEE under its own name or trade mark.
- 3) Mark the product with the address at which the manufacturer can be contacted about the product. The address and accompanying phrase must be on the product. If the address and phrase cannot be on the product, then it must be on the packaging or accompanying documents. The following exact phrase and address must be used.

For RoHS Inquiries:

[Registered manufacturer name, trade name, or trade mark]

c/o CommScope Inc.

Corke Abbey, Bray

Co., Dublin, Ireland

Attn: Legal Department

- 4) Mark the product with CE on the product. If the CE mark cannot be applied to the product due to the size or nature of the product, the CE mark must be on the packaging AND accompanying documentation. If there is not accompanying documentation and the CE mark cannot be affixed to the product, then the CE mark can be on the packaging only. The CE marking must follow [Regulation \(EC\) 765/2008](#) and shall be affixed visibly, legibly, and indelibly. The CE mark must be at least 5 mm high and affixed prior to putting the product on the EU market. The risk assessment, technical documentation and declaration of conformity must be completed prior to affixing the CE mark.

6.3.4 Changes

Any changes to the supplier's raw materials, parts, assemblies, sub-assemblies or products that require an update to the information provided to CommScope, the supplier must send amended information, declaration, Technical Documentation, and Declaration of Conformity immediately and no later than three weeks before a change. CommScope reserves the right to request additional information necessary to comply with the RoHS II Directive 2011/65/EU.

6.4 REACH

6.4.1 Compliance

The supplier's raw materials, parts, assemblies, sub-assemblies, and products shall be in compliance with the regulation implementing the provisions of the [European Parliament and Council Directive on Registration Evaluation Authorization and Restriction of Chemicals EC/1907/2006](#) (known as "REACH"). Under the EU REACH Directive, suppliers are obligated to notify CommScope of the presence of a Substance of Very High Concern (SVHC) greater than 0.1% (w/w) of the substance in the article supplied. In addition, the supplier of a product made up of more than one article, must determine for each article whether such a substance is present in a concentration above 0.1% weight by weight of that article.

6.4.2 Documentation

With regard to all raw materials, parts, assemblies, sub-assemblies, and products known as "articles" under the REACH Directive, the supplier shall provide CommScope, upon request and free of charge, within two weeks of request, all information and data related to REACH including, but not limited to, a statement of compliance, SVHC notification and full material disclosure of information regarding any substances in raw materials, parts, assemblies, sub-assemblies, and products that are on the [REACH Candidate List](#) or [REACH Authorization List Annex XIV](#), or REACH Annex XVII list for specific applications. Information shall include, regardless of quantity, if any SVHC to the most current candidate list and the concentration are contained in the raw materials, parts, assemblies, sub-assemblies, and products or at the article level in the product. Substances listed on the REACH Authorization list cannot be present in any quantity in the raw material, part, assembly, sub-assembly or product after the sunset date. In addition, a safe handling sheet shall be provided to CommScope if an SVHC is present at any concentration. All documents provided shall list the CommScope part number, the supplier part number, description of the material, and shall be dated and signed.

6.4.3 Changes

Any changes to the supplier's materials and products that require an update to the information provided to CommScope, the supplier must send an amended declaration and full material disclosure as requested by CommScope immediately and no later than three weeks prior to a change. CommScope reserves the right to request additional information necessary to comply with (EC/1907/2006) REACH Directive.

6.5 China RoHS

6.5.1 Compliance

Supplier warrants and covenants that the raw materials, parts, assemblies, sub-assemblies, and products to be supplied to CommScope are in compliance with the regulation implementing the provisions of SJ/ T 11364-2014 Restriction of Hazardous Substance in electrical and electronic products, herein China RoHS, understanding and complying with the proper restrictions, labeling and documentation requirements.

The scope of China RoHS applies to products imported into China for sale onto the China market and products manufactured in China for use in China. A supplier's contract manufactured product or third party private label product may require meeting the China RoHS requirements.

The supplier's raw materials, parts, assemblies, sub-assemblies, and products shall not contain any of the substances at the homogeneous level above the threshold concentration levels unless a RoHS II exemption for the specific application also exists. China RoHS allows for concentrations of the substances over the threshold levels by using the appropriate mark and completing the documentation requirements. However, EU RoHS only allows for substance concentrations over the thresholds if an exemption is used. Since raw materials, parts, assemblies, sub-assemblies and products must meet EU RoHS II and China RoHS, only those that have a valid EU exemption for the part may have greater substance concentrations as listed in the EU application's exemption. The list below shows the substances and the threshold concentrations levels for China RoHS.

- Lead (1000 ppm, 0.1%),
- Mercury (1000 ppm, 0.1%),
- Hexavalent chromium (1000 ppm, 0.1%),
- Cadmium (100 ppm, 0.01%),
- Polybrominated biphenyls (PBB's) (1000 ppm, 0.1%),
- Polybrominated diphenyl ethers (PBDE's) but not Deca-BDE (1000 ppm, 0.1%),

Under China RoHS, lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBE's), polybrominated diphenyl ethers (PBDE's) but not Deca-BDE cannot be intentionally added to metal coatings. China RoHS includes parts used as packaging and parts that are batteries.

6.5.2 Documentation

With regard to all raw material, parts, assembly, and sub-assemblies, under China RoHS, the supplier shall provide CommScope, upon request and free of charge, within two weeks of request, all information and data related indicating the presence of lead, mercury, hexavalent chromium, cadmium, polybrominated biphenyls (PBBE's), polybrominated diphenyl ethers (PBDE's) and the concentration level in ppm. If the concentration of the substance is over the threshold level, a corresponding EU exemption must exist.

6.5.3 Marking

Product suppliers where products are categorized as EEP shall be marked with the appropriate Pollution Control Logo and indicate the Environmental Protection Use Period (EPUP), if applicable as per SJ/T 11363-2014.

The Pollution Control Logo defines whether the product contains any of the six hazardous substances. The Pollution Control Logo containing the letter "e" indicates the product is EEP and contains less than the threshold concentration values of all six hazardous substances. If any of the restricted substances are present in the homogeneous material of EEP above the threshold concentrations, EPuP must be determined and indicated.

The EPuP is the period of time before any of the China RoHS substances are likely to leak out of the product, causing possible harm to health and the environment. The EPuP applies when one or more of the restricted substances are present in the product above the threshold concentration levels. If the EPuP applies, each product shall be labeled with a circle composed of two arrows containing a number that gives the EPuP in years as shown below in the table below. For example, a circled 10 indicates an EPuP of 10 years. EPuP labels are indicated every year up to 10 years, then multiple of 5 to 95.




The date of manufacture of the EEP is indicated as the beginning of EPuP. If the EPuP label is required, the date of manufacture of the product in month, day, year must be marked on the product. Sometimes this data is in the form of a barcode. Other possibilities are 'year/month/day'; or serial numbers and commodity bar codes containing the manufacture date. If serial numbers and commodity bar codes are used, the manufacturer is obliged to provide the necessary manufacture date search services for users or authorities.

EPUP is calculated under normal operating conditions. Extreme environmental conditions do not need to be considered in the calculation. EPuP is not the same as the "safe use period" which evaluates such safety factors as electrical/electronic performance and electromagnetic safety. In January 2010, the Ministry of Industry and Information Technology (MIIT) published the final EPuP Guidelines, "General Guidelines of Environment-Friendly Use Period of Electronic Information Products" (SJ/Z 11388-2009). This Standard describes the acceptable methods on how to calculate the EPUP. In the "General Guidelines of Environment-Friendly Use Period of Electronic Information Products" (SJ/Z 11388-2009) standard, the length of the EPUP in years is equal to the technical life in years of a given product category. The technical life of a product is the period during which the product is expected to provide useful and safe service to the user plus the market life of the product including transportation and storage before being sold. If the product is repairable, technical life also includes the period during which the restored product provides useful and safe service to the user. The technical life does not include the pre-sales period.

Pollution Control Logos must be on the product if there is greater or equal to 5000 mm² of space available on the product. If there is insufficient space, an irregular product or the function of the product prevents printing on the product, then the Pollution Control Logo may be placed in the product documentation or product user manual.

The Pollution Control Logo shall be at least 5 mm X 5 mm. They shall be clear, distinguishable, visible, hard to fade and hard to remove.

Table 1: Pollution Control Logos for EEP Showing the Environmentally Protection Use Period (EPuP)

Symbol	Description
	<p>This symbol indicates that the parts displaying with this label do not contain any of the restricted toxic and hazardous substances above the prescribed thresholds in the China RoHS legislation. The substances and their thresholds are:</p> <ul style="list-style-type: none"> • Lead (Pb) 0.1% (or 1000 ppm) • Mercury 0.1% (or 1000 ppm) • Hexavalent Chromium (Cr+6) 0.1% (or 1000 ppm) • Polybrominated Biphenyls (PBB) 0.1% (or 1000 ppm) • Polybrominated Diphenyl Ethers (PBDE) 0.1% (or 1000 ppm) • Cadmium 0.01% (or 100 ppm)
 Pb	<p>The 50 Pb symbol indicates that the part contains lead which is above the prescribed threshold. This 50 symbol also refers to the Environmental Protection use Period (EPuP). EPuP defines the period in which the toxic and hazardous substances or elements contained in the electronic information products are in normal use. These substances or elements will not leak out or undergo abrupt change. In addition, the use of the electronic information product by an electronic information product user will not result in serious pollution to the environment or result in serious personal injury or property damage with regard to the user. The use of lead in these products will for 50+ years not result in a detrimental environmental impact while in use. If the EPuP symbol is used, then the date of manufacture must be on the product.</p>
	<p>This symbol indicates that the part contains one or more of the restricted toxic and hazardous substances listed in the prescribed threshold. If the EPuP symbol is used, then the date of manufacture must be on the product.</p>
No Symbol	<p>No symbol indicates the part is either excluded from the legislation or has not yet been reviewed.</p>

6.5.4 The Hazardous Substances Table

Unless there is no declarable substances ('e' product), the toxic or hazardous substances and elements table must be included in product documentation or product instructions and shall be in Simple Chinese, at a minimum. The table also may be put on a CD or DVD that is shipped along with the product. The table may be on a website if the product a) the product has an irregular shape or maximum surface area less than 5x10³mm² or b) if the product is for professional use only.

Producers and importers who manufacture or import EEP must specify in the table if the China RoHS substances are present in the product or part above the concentration threshold limits by indicating an "X". If the hazardous substances are not present in the product at the homogeneous material level or are below the concentration threshold limit requirement, then an "O" shall be marked in the table. Font size used in the table should be at least 1.8 mm.

In order to complete the table, the logical sub-assemblies shall be divided up for the product. For a complex product, the sub-assemblies will typically be the individual components. For example, the printed circuit assemblies (PCAs), mechanical chassis, and outer enclosure all may be listed for a single product. All parts need to be accounted for in a logical and easily understood manner. These groupings will form the "Components" of the disclosure table. Grouping of parts into miscellaneous" or "other" is not allowed.

The table must be in Simple Chinese, at a minimum. The table should also contain information on the recyclability of the product. The table is a self-declaration with no obligation to analyze. The below table is an example.

Table 2: The Toxic or Hazardous Substances or Elements

表1 有害物质名称及含量标识格式

产品中有毒物质的名称及含量

部件名称 "Part Names"	有害物质 "Hazardous Substances"					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
.....
.....
本表格依据 SJ/T 11364 的规定编制。 O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 (企业可在此处, 根据实际情况对上表中打“X”的技术原因进行进一步说明。)						

Optional Explanation of 'X's

05 February 2016

中国电子电气产品中有毒物质的名称及含量
China EEP Hazardous Substance Information

25 Restricted Materials Above Threshold

部件名称 (Component Name)	有害物质 Hazardous Substance					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
继电器 (Relays)	X	O	O	O	O	O
本表格依据SJ/T 11364标准的规定编制。 This table is compiled according to SJ/T 11364 standard.						
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。 Indicates that the concentration of the hazardous substance in all homogeneous materials of the part is below the relevant threshold of the GB/T 26572 standard.						
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572标准规定的限量要求。 Indicates that the concentration of the hazardous substance in at least one homogeneous material of the part is above the relevant threshold of the GB/T 26572 standard.						
电子电气产品的环保使用期限依据SJ/T 11388标准的规定确定。 The EPUP value of EEP is defined according to SJ/T 11388 standard.						

6.6 CommScope Restricted Substance List

6.6.1 Compliance

Specific substances are banned or declarable depending on the application of use (manufacturing, products, or packaging). Review the CommScope Restricted Substance List to ensure compliance. The CommScope Environmental Product Compliance (EPC) - Restricted Substance List can be found at [CommScope website](#).

6.6.2 Documentation

With regard to all raw materials, parts, assemblies, sub-assemblies, and products sold to CommScope, the supplier shall provide CommScope, upon request and free of charge, within three weeks of request, all information and data related to the CommScope Restricted Substance List including but not limited to a declaration and full material disclosure of information regarding any substances used in manufacturing, the products, or packaging. Declarations shall be sent to productcompliance@commscope.com listing the CommScope part number, the supplier part number and description of the material along with the compliance status.

6.6.3 Changes

Any changes to the supplier's materials and products that require an update to the information provided to CommScope, the supplier must send an amended declaration and full material disclosure as requested by CommScope immediately and no later than three weeks prior to a change.

6.7 SDS Form

6.7.1 Compliance

Safety Data Sheet only applies to hazardous chemicals and not to parts, assemblies, sub-assemblies or products. A Safety Data Sheet (SDS), complying with the requirements [The Globally Harmonized System of Classification and Labeling of Chemicals \(GHS\)](#) must be provided, if applicable, to CommScope, prior to or upon shipment. Substances listed must be identified by Chemical Abstracts Service (CAS) Registry Numbers when available. Identification of those substances listed as Toxic Chemicals under Title III, Section 313 of the Superfund Amendments and Reauthorization Act must be provided, either directly on the SDS or as a separate attachment. Sufficient information must be included on the SDS to allow compliance with federal and state labeling laws. It is recommended that the SDS contain U. S. Department of Transportation information including, but not limited to, Hazard Class, Proper Shipping Name, Identification Number, and Packaging Group as required by the using country. All SDS shall be sent along with the material or sent to the address the material will be shipped.

6.8 Conflict Minerals

6.8.1 Compliance

All raw materials, parts, assemblies, sub-assemblies, and products to be supplied must be in compliance with all the requirements of Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the U.S. Securities and Exchange Commission ("SEC") rules and regulations. The most current version of the EICC (Electronic Industry Citizenship Coalition) GeSI (Global e-Sustainability Initiative)

6.8.2 Documentation

The most current version of the [Conflict Minerals Reporting Template](#) form shall be provided upon request within two weeks of request for each material or product.

Declarations shall:

- (i) identify any raw materials, parts, assemblies, sub-assemblies, and products that contain "conflict minerals" (tin, tungsten, tantalum and gold) or the derivatives of cassiterite, columbite-tantalite, wolframite, regardless of where they are sourced, processed or sold if the conflict minerals or derivatives are "necessary to functionality or production" of the product and/or raw materials,
- (ii) determine whether the conflict minerals and derivatives came from recycled or scrap sources,
- (iii) identify the country of origin of the conflict minerals and derivatives,
- (iv) determine whether the conflict minerals and derivatives came from a "covered country". The "covered countries" include the Democratic Republic of Congo, Burundi, Central African Republic, Tanzania, Zambia, Angola, Rwanda, South Sudan, and Uganda),

(v) determine whether the conflict minerals financed or benefited armed groups in the “covered countries” (or are considered “DRC conflict free”),

(vi) disclose process for determining and verifying the information provided.

6.8.3 Conflict Regions

Furthermore, suppliers shall not procure for use in raw materials, parts, assemblies, sub-assemblies, and products conflict minerals that originate from mines and smelters in the “Conflict Region” and that are not certified as “conflict free” per the [Conflict-Free Smelter Program](#) assessment protocol or alternative approved due diligence framework as defined by the Dodd-Frank Act. “Conflict Region” includes the region of area which includes the “covered countries”. Suppliers shall undertake reasonable due diligence with their supply chains to assure that conflict minerals are being sourced only from mines and smelters outside the “Conflict Region” or mines and smelters which have been certified by an independent third party as “conflict free” if sourced within the “Conflict Region”. All suppliers shall be in compliance with the CommScope Conflict Minerals Policy. The policy can be found at [CommScope website](#).

6.8.4 Changes

For any changes to raw materials, parts, assemblies, sub-assemblies, and products or the sourcing that require an update to the information provided on the EICC GeSI Conflict Minerals Template form, the supplier must send an amended EICC GeSI Conflict Minerals Template immediately and no later than three weeks prior to the change. CommScope reserves the right to request additional information necessary to comply with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the U.S. Securities and Exchange Commission (“SEC”) rules and regulations.

6.9 Proposition 65

6.9.1 Compliance

All materials, parts, assemblies, sub-assemblies and products shall be in compliance with California’s [Proposition 65](#).

6.9.2 Documentation

Supplier shall provide CommScope, upon request and free of charge, within two weeks of request, all information and data related proposition 65 chemicals. The declaration shall include the chemical, identify the homogeneous material, and the concentration present in ppm.

6.9.3 Changes

For any changes to products and/or raw materials that require an update to the information provided, the supplier must send an amended declaration immediately and no later than three weeks prior to a change.

6.10 TSCA Listing

6.10.1 Compliance

Certification that a material is in compliance with the [Toxic Substances Control Act \(TSCA\)](#) and significant new use rules (SNURs) under the Act is required. Information must be supplied prior to manufacture, import, or process a new material made expressly and exclusively for CommScope Inc. For a new material not made exclusively for CommScope Inc., certification must be supplied prior to CommScope Inc. acceptance of that new material for use. Where formulation information is not proprietary to the manufacturer or the manufacturer’s suppliers, the manufacturer shall list on the certification letter the components or ingredients of the material by chemical name and CAS Registry Number (when available). Send certification letters to: <mailto:productcompliance@commscope.com>.

6.11 Packaging and Packaging Materials

6.11.1 Compliance

Under this specification, the term “packaging” means a container providing a means of marketing, protecting, handling, or providing ease of transport for a product. It includes a unit package, an intermediate package and a shipping container. “Packaging” also means and includes, but is not limited to, such unsealed receptacles as carrying cases, crates, cups, pails, rigid foil and other trays, wrappers and wrapping film, bags and tubs.

6.11.2 The term "packaging component" includes any individual assembled part of a package such as, but not limited to, any interior or exterior blocking, bracing, cushioning, weatherproofing, exterior strapping, coatings, closures, labels, inks, dyes, pigments, adhesives, or any other additives.

6.11.3 The following packaging principles shall be adhered to in order to reduce environmental impact.

- 1) Packaging shall be designed, produced and commercialized in such a way to stimulate and maximize recyclability and to minimize its impact on the environment in all phases of its life cycle.
- 2) Packaging shall be designed while minimizing the amount of resources needed both in volume and weight, and maximizing the percentage of recycled materials to enable closing the materials loop.
- 3) Where recycled content is not or limited available, alternative materials like certified renewable resources or bio-based materials shall be used.

6.11.4 Heavy Metals and Flame Retardants Regulations for Packaging and Packaging Components.
 Lead, cadmium, mercury, hexavalent and chromium, shall not be present in any packaging material or packaging component exceeding 100 ppm (0.01%) by weight of that material. [\(EU 94/62/EC\)](#).

6.11.5 Arsenic Packaging and Packaging Component Requirements.
 Arsenic shall not be intentionally added to any packaging or packaging components.

6.11.6 REACH Candidate List (Article 33) (Substances of Very High Concern) Requirements.
 Packaging and packaging components shall not contain any SVHCs in the most current candidate list greater than 0.1% by weight. (EC 1907/2006). See REACH section for applicable link to the REACH SVHC candidate list and applicable requirements.

6.11.7 Desiccant Regulations Packaging and Packaging Component Requirements.
 Desiccant containing Dimethyl Fumarate (CAS Number 624-49-7) shall not be used along with packaging or packaging components in concentrations greater than 1 ppm. [\(EU 2009/251/EC\)](#).

6.11.8 Wood Assembly Packaging and Packaging Component Regulations.
 Packaging and packaging components presented with the products used to exclusively support, protect or carry another product which may or may not be wood based are exempt from EU Timber Regulation No 995/2010 and the US Lacey Act. If the wood packaging or wood packaging components are used along with the product or could be products in their own right, then all necessary requirements under the EU Timber Regulation and the US Lacey Act must be followed.

6.11.9 Pallets, Crates, Reels and Other Wooden Packaging.
 Wooden packaging including pallets shall be free of bark and pests in accordance to International Standard for Phytosanitary Measures -ISPM 15 [Regulation of Wooden Packaging in International Trade](#).

6.11.10 Formaldehyde Requirements for use in Packaging and Packaging Components.
 Formaldehyde must not be intentionally added to packaging materials with the exception of adhesive glues. Glue adhesives used to bond wood packaging are limited to 1000 ppm (1000 mg/kg) formaldehyde at the homogenous level. An off-gassing limit of 0.3 ppm formaldehyde must be met on all packaging. Additional outgassing requirements for specific substances relevant to packaging and packaging components are listed below.

6.11.11 Outgassing from Packaging and Packaging Components Requirements

Residues or Outgassing from Products and Packaging	Maximum Concentration Limit ppm (mg/kg)
Formaldehyde Emissions (also see Formaldehyde Requirements specific to packaging in the CommScope Restricted Substance List)	0.12
Carbon Monoxide	25
Carbon Dioxide	5000/5 vol. %
Cyanide	0.9
Ammonia	20
Sulfuryl Fluoride	2.5

Residues or Outgassing from Products and Packaging	Maximum Concentration Limit ppm (mg/kg)
Chloropicrine	0.1
Dichloroethane	1.5
Benzene	1
Styrene	25
Toluene	40
Xylene	48

6.11.12 Fumigants and Biocides Used in Transport

Active fumigation using methyl bromide and phosphine is not allowed in packaging or transport material. Any biocides used in treatment of wood packaging or transport material not approved in EU Biocides Directive shall not be used.

6.11.13 Documentation

Supplier shall provide to CommScope, upon request and free of charge, within two weeks of request, all compliance information and data related to packaging and packaging components.

6.11.14 Changes

For any changes to packaging and packaging components that require an update to the information provided, the supplier must send an amended declaration immediately and no later than three weeks prior to a change.

6.12 Waste from Electrical and Electronic Equipment (WEEE)

6.12.1 Compliance

The supplier's products shall comply with directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE). The supplier shall register as a 'WEEE producer', report the amount of products sold and finance the collection arrangements for their products at the end-of-life in each country they are sold.

6.12.2 Documentation

Documents delivered with the product including technical documentation, datasheet, and instructions shall contain recycling information.

6.12.3 Marking

The product shall be marked with the crossed-out wheeled bin as shown below.



6.13 Batteries

6.13.1 Compliance

If a supplier's product is a battery (including batteries which are incorporated into electrical equipment), this shall comply with directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators. The Directive applies to all batteries and accumulators placed on the European Union market. The main obligations are:

- Chemical Restrictions
0,0005 % by weight threshold for mercury (2% for button cell) and 0,002% by weight threshold for cadmium.
- Product Design
Waste batteries must be readily removable and this must appropriately indicated to the end-user, unless continuity of power supply is necessary and requires permanent connection with the appliance for safety, performance, medical or data integrity reasons.

6.13.2 Documentation

The supplier must be registered with the national authorities and manage battery collection, recycling and reporting in every EU Member State where he sells batteries or equipment containing batteries.

6.13.3 Marking

Batteries must be marked with the crossed-out wheeled bin and labeled with their capacity. Additional labeling may be required if the presence of mercury, cadmium, or lead exceeds 0,0005%, 0,002% or 0,004%, respectively.

6.14 Resins

6.14.1 Compliance

Resins that are either molded or extruded in the manufacturing of CommScope's products, shall comply with RoHS, REACH, Proposition 65 and other requirements as required.

6.14.2 Documentation

Supplier shall provide CommScope, upon request and free of charge, within two weeks of request, full material disclosure in accepted CommScope format for the resins supplied.

6.15 Metals

6.15.1 Compliance

Metals shall comply with RoHS, REACH, Proposition 65 and other requirements as required.

6.15.2 Documentation

Supplier shall provide CommScope, upon request and free of charge, within two weeks of request, full material disclosure in accepted CommScope format or confirm in writing the industry specification standard, such as ASTM standards, corresponding to the metals supplied.

6.16 Testing

All purchased raw materials, parts, assemblies, sub-assemblies, and products are subject to regular screening tests, including X-Ray Fluorescence Spectroscopy (XRF) and any other method deemed appropriate. Upon CommScope's request, suppliers shall provide XRF and/or chemical analysis test results, bill of materials, and other product compliance documentation related to the supplied parts.

Failure to meet any of the above requirements shall be sufficient grounds for rejection. CommScope reserves the right to reject all, or any portion, of such material, parts, assembly, sub-assembly, and product, under the terms of the order covering the purchase of the material. Rejected items shall be returned to the supplier at no cost to CommScope.

6.17 Vendor Quality Program

The supplier shall have adequate process control and due diligence program for product compliance. The supplier shall perform inspection and product testing necessary to insure that all specifications, standards of good workmanship, and purchase order requirements are met.

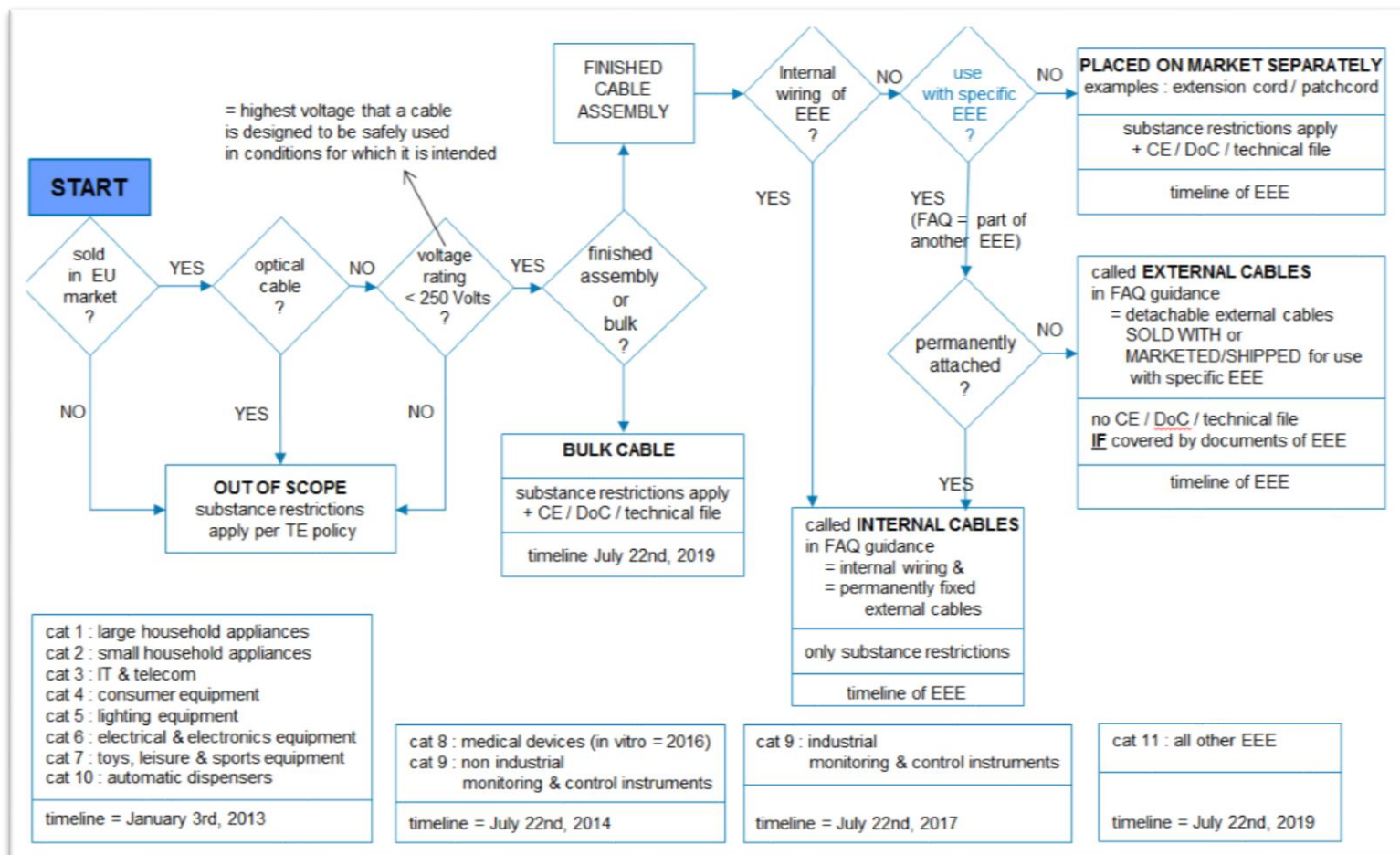
6.18 Changes in Manufacturing, Composition, and Material Requirements

No changes shall be made in the composition of materials, parts, assemblies, sub-assemblies, or products without a written approval of the CommScope engineer.

7.0 Flowcharts, Drawings, Tables

Flowchart on next page

7.1 Flowchart 1: EEE RoHS Decision Tree for Cable



8.0 Revision History

Release Date	DCR	Revisions
30 Apr 2015	040215-1	New Global Corporate document
14 Oct 2016	092616-2	Updated section 4.0 Accountability and Coordinator(s) • Updated section 5.0 definition for EIP to EEP for China RoHS • Updated section 6.5 for regulatory changes to China RoHS including changes to hazardous substances table • Added 6.11.12 Fumigants and Biocides Used in Transport • Added 6.14 Resins • Added 6.15 Metals • Added Section 7.0 Flowchart 1: EEE RoHS Decision Tree for Cable
20 Jul 2018	061818-3	Added LCA statement under section 2.1 Created Procurement bullet and statement under Accountability section under 4.3 instead of 4.2.5 under Engineering. Divided one sentence into 2 clear statements. Updated approvers to remove Richard DallAsen, James Decoe, Davy Brown Added Gordon Fraser, Dieter Verdegam, Geoff Sullivan