



Environmental Claim Validation Procedure (ECVP)

Environmental Claim Validation Procedure (ECVP) for Defined Source Content

UL ECVP 2809-1



Summary of Topics

This is the Second Edition of the Environmental Claim Validation Procedure (ECVP) for Defined Source Content, UL ECVP 2809-1, dated 11/07/2023.

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1.0	Release	04/06/2023
2.0	Revision	11/07/2023

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The series of standards of UL ECVP 2809-1 to UL ECVP 2809-4 is a revision of UL ECVP 2809 for Recycled Content, Edition 5. The tracking of past UL ECVP 2809 versions is listed below.

Version	Comments	History
1.0	Release	11/14/2012
2.0	Revision	05/14/2014
3.0	Revision	4/28/2017
4.0	Revision	7/19/2019
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Content

1.0	GENERAL	5
2.0	SCOPE	5
3.0	UNITS OF MEASUREMENT	6
4.0	UNDATED REFERENCES	6
5.0	GLOSSARY	6
5.1	General	6
5.2	Chain of custody related terms	6
5.3	Supply chain related terms	6
5.4	Chain of Custody models related terms	7
5.5	Other terms	8
6.0	GENERAL DOCUMENTATION REQUIREMENTS	8
6.1	Acceptable materials	8
6.2	Finished Product Details	8
6.3	Traceability of the manufacturing process	9
6.4	Traceability between Sites	9
6.5	Compliance Supporting Documents	10
7.0	GENERAL CALCULATIONS	10
8.0	REQUIREMENTS FOR IDENTITY PRESERVED CHAIN OF CUSTODY	11
9.0	REQUIREMENTS FOR SEGREGATED MANAGEMENT OF MATERIALS	11
10.0	REQUIREMENTS FOR CONTROLLED BLENDING CHAIN OF CUSTODY	12
11.0	ALLOCATION SYSTEM (MASS BALANCE COC OR CREDIT ACCOUNTING)	12
11.1	General	12
11.2	Defining system and system boundary	12
11.3	Transformations at and within system boundaries	13
11.4	Conversion of credits into and debits out of the system	13
12.0	BOOK AND CLAIM CHAIN OF CUSTODY	15
13.0	PROCEDURE	15
14.0	ACCEPTABLE CLAIM WORDING	15
14.1	General	15

APPENDIX A – Chain of Custody models within a supply chain and special examples

APPENDIX B – Alignment with global standardization

Introduction

1.0 GENERAL

1.1 This procedure describes methods for auditing Chain of Custody and calculating the content of materials with specified characteristics, a “Defined Source” material, in raw materials, manufactured products and components of manufactured products. The specific characteristics of Defined Sources are specified in the other parts of the UL ECVP 2809 series of standards, including recycled content (post- and pre-consumer), byproduct synergy, reused components, refurbished components, ocean plastic, ocean bound plastic or biomass sources of materials. Other Defined Sources of material are allowed when claims include a definition of the characteristic of the Defined Source.

1.2 The procedure defines the application of different Chain of Custody models to connect the source of a Defined Source material with the final product making the claim of Defined Source content. In accordance with Chain of Custody design and models specified in ISO 22095 these 4 models are within the scope of this procedure:

- Models without mixing: Identity Preserved; Segregated
- Models with mixing: Controlled Blended; Mass Balance (Allocated and Mass Average)

1.3 The goal of using any of these content claims is to extend the life of materials and reduce consumption of natural resources by replacement of virgin materials, thus providing substantial environmental benefit and encouraging the circular use of materials.

1.4 This Environmental Claim Procedure does not address whole product lifecycle effects and environmental tradeoffs, health and safety regulations, and is not intended to replace any applicable legal regulations.

2.0 SCOPE

2.1 This procedure provides a framework for the evaluation and validation of Defined Source material content claims in manufactured products when such claims are based on a supply chain using one or more of the Chain of Custody models from Section 1.2.

2.1 The supply chain may comprise of various members using different Chain of Custody models in each step of the supply chain. Therefore, the appropriate Chain of Custody to be applied may vary in each level of the supply chain. In the evaluation of a complex supply chain consisting of multiple members with diverse links between actors in the supply chain, the Chain of Custody model with the least traceability and assured presence for the Defined Source material will be used in the claim (see Section 14.0).

2.3 Multiple Defined Sources can be evaluated for the same product concurrently and result in a single claim for the product. The claim may contain different Defined Sources or multiple Defined Sources may be combined into a single Defined Source content claim.

2.4 Products may claim an allocated amount of Defined Source material content (e. g. pre-consumer or post-consumer recycled content). The minimum percentage of Defined Source content required in a product to be able to participate in this Environmental Claims Validation will be determined on a case-by-case basis. Products validated by a desktop and on-site audit shall receive a Defined Source content claim, and the allocated percentage applicable to each product shall be stated as a mass ratio percentage in the claim.

2.5 Not all sections of the standard will apply in every evaluation and only those sections matching the chain of custody model(s) in use will be used. With some Chain of Custody models there is a reduction of the transparency due to reduced degree of physical linkage or source identity of the material in the product which requires additional documentation. Claims typically consist of the manufacturer indicating either an average percentage or minimum percentage of content. This procedure identifies and addresses all substances included as part of the product, part, or material.

2.6 Sections 6 – 13 are used depending on the supply chain and processes occurring at the locations in the supply chain. Some examples for appropriate choice of Chain of Custody model used within a supply

chain are given in Annex A. The examples are not exhaustive of activities and organization of supply chains for Defined Source content and should be used as illustrative of general principles for applying Sections 6 – 13 to operations within a supply chain. Other combinations are possible and likely to be found in practice.

2.7 Other procedures in the other parts of the UL ECVP 2809 series of standards set requirements for Defined Source material including specific characteristics required of the Defined Source and Chain of Custody models appropriate for maintaining the identity of the source material when required. Those requirements only apply to the target Defined Source material content.

3.0 UNITS OF MEASUREMENT

3.1 For the purposes of this procedure, values shall be reported in accordance with the requirements of the individual criterion. If the manufacturer's choice of unit deviates, that change shall be documented and justified as to the reason and relevance for that change.

4.0 UNDATED REFERENCES

4.1 Any undated reference to a code or standard appearing in the requirements of this procedure shall be interpreted as referring to the latest edition of that code or standard.

5.0 GLOSSARY

5.1 General

For the purpose of determining and evaluating the appropriate Chain of Custody model and requirements therefrom, the following definitions apply.

Definitions in 5.2 - 5.4 were adapted by UL from Chain of Custody — General terminology and models, ISO 22095, Version ISO 22095:2020, on behalf of the International Organization for Standardization. All rights reserved.

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5.2 Chain of custody related terms

5.2.1 CHAIN OF CUSTODY (COC) - Process by which inputs and outputs and associated information are transferred, monitored, and controlled as they move through each step in the relevant supply chain.

5.2.2 CHAIN OF CUSTODY MODEL – An approach taken to control inputs and outputs and associated information in a particular Chain of Custody system.

5.2.3 CHAIN OF CUSTODY SYSTEM: set of measures designed to implement a Chain of Custody (5.2.1), including documentation of these measures.

Note 1: The purpose of a Chain of Custody system is to provide credibility that the given material or product has a set of specified characteristics (5.3.6).

Note 2: The information linked to materials or products is transferred, monitored and controlled throughout the entire supply chain (5.3.8) or parts of it.

5.3 Supply chain related terms

5.3.1 CHARACTERISTIC – Distinguished feature

5.3.2 INPUT - Material or product that enters an organization or part of an organization.

[Source: ISO 14044:2006+A1:2017, 3.21, modified —The wording and note 1 have been modified. Notes 2 and 3 have been added.]

Note 1: Input may be used at any stage of the supply chain (5.3.8).

Note 2: Input may also include reused and recycled materials or products.

Note 3: Input will have associated information.

5.3.3 OUTPUT - Material or product that leaves an organization or part of an organization.

[Source: ISO 14044:2006+A1:2017, 3.25 modified — The wording and Note 1 has been modified. Notes 2 and 3 have been added.]

ECVP for Defined Source Content

Note 1: Output can be created at any stage of the supply chain (5.3.8).

Note 2: Output might include other products resulting from production processes.

Note 3: Output will have associated information.

5.3.4 PRODUCT CHARACTERISTIC - Distinguishing feature of a material or product

Note 1: A product characteristic can be qualitative or quantitative.

5.3.5 PRODUCTION CHARACTERISTIC - Distinguishing feature of one or more production processes in the supply chain (5.3.8)

Note 1: Production characteristics sometimes create product characteristics (5.3.5). Examples include the grinding of wood, the chemical treatment of wood for pulp production and food cooked at a low temperature. Examples of production characteristics that do not normally create a product characteristic include production according to a particular specification, such as the sustainable production of the material; the absence of child labor; particular human rights standards or the identity of the primary processor.

Note 2: Production characteristics can include the type of transportation and storage.

5.3.6 SPECIFIC CHARACTERISTIC – Set of products and/or production characteristics (5.3.5) that the Chain of Custody is designed to maintain.

5.3.7 SOURCE – specific originator at a location of a material or product with a specified characteristic (5.3.6)

Note 1: The originator is typically a specific supplier but can also be a specific manufacturer or specific processor adding a particular characteristic.

5.3.8 SUPPLY CHAIN – Series of processes or activities involved in the production and distribution of a material or product through which it passes from the source (5.3.7)

Note 1: A supply chain is typically composed of a series of different organizations.

5.4 Chain of Custody models related terms

5.4.1 BOOK AND CLAIM MODEL - Chain of Custody model in which the administrative record flow is not necessarily connected to the physical flow of material or product throughout the supply chain (5.3.8)

Note 1: This Chain of Custody model is also referred to as "certificate trading model" or "credit trading".

Note 2: This is often used where the certified/specified material cannot or only with difficulty, be kept separate from the non-certified/specified material, e.g., green credits in an electricity supply.

Note 3: This model is not part of UL ECVP 2809 as the criteria for physical presence of the source in the product cannot be fulfilled.

5.4.2 CONTROLLED BLENDING MODEL - Chain of Custody model in which materials or products with a set of specified characteristics (5.3.6) are mixed according to certain criteria with materials or products without that set of characteristics resulting in a known proportion of the specified characteristics in the final output (5.3.3).

Note 1: This Chain of Custody model is also referred to as the 'single percentage method'.

5.4.3 IDENTITY PRESERVED MODEL - Chain of Custody model in which the materials or products originate from a single source and their specified characteristics (5.3.6) are maintained throughout the supply chain (5.3.8)

5.4.4 MASS BALANCE MODEL - Chain of Custody model in which materials or products with a set of specified characteristics (5.3.6) are mixed according to defined criteria with materials or products without that set of characteristics.

Note 1: The proportion of the input (5.3.2) with specified characteristics might only match the initial proportions on average and will typically vary across different outputs (5.3.3).

Note 2: The mass balance model is also referred to as allocation system or credit accounting.

5.4.5 SEGREGATED MODEL - Chain of Custody model in which specified characteristics (5.3.6) of a material or product are maintained from the initial input (5.3.2) to the final output (5.3.3)

Note 1: Addition of material with different characteristics and/or grade to the input is not allowed.

Note 2: Commonly, material from more than one source contributes to a Chain of Custody under the Segregated model.

5.5 Other terms

5.5.1 CLOSED LOOP SYSTEM – A system in which materials are reclaimed, returned to and reused at the same material technical application equivalence or performance specifications as when the material was first used.

5.5.2 CREDIT UNIT – The unit of measure for credits within a credit system. See Section 11 for use of credits.

5.5.3 DEFINED SOURCE CONTENT – Content from a Defined Source with a specific characteristic (5.1.2.6) which may include but is not limited to recycled, closed loop recycled, byproduct synergy, reused, refurbished, ocean plastic or biomass sources of material. Claims made about material from a Defined Source shall retain the identity of the Defined Source in any claims made in the final product about the source of material or can be combined into a single Defined Source content claim.

5.5.4 ORIGINATOR – The facility that participates as a supplier of materials, energy, by-products and/or waste in a by-product synergy network.

5.5.5 RECIPIENT – The facility that participates as a recipient of materials, energy, by-products and/or waste in a by-product synergy network.

5.5.6 TRACEABILITY – The ability to trace the history, application, location or source(s) of a material or product throughout the supply chain.

COMPLIANCE, EVALUATION AND ASSESSMENT CRITERIA

6.0 GENERAL DOCUMENTATION REQUIREMENTS

The requirements in Section 6 apply to all Chain of Custody models. In the following, the documentation requirements are given for each member (actors) within the validated supply chain to enable the required traceability for the material flow during the whole production process.

In the case of a complex supply chain with several members the documentation requirements 6.1 – 6.3 are applicable to all members of the supply chain in the scope of the audit.

Below a list of key requirements used to establish validation of Defined Resource content:

- Documentation on the design of the product.
- Documentation demonstrating that finished products were manufactured according to the design specifications.
- Documentation from the manufacturers supply chain ensuring material supplied has the prescribed Defined Source content.
- Documentation from the manufacturer or manufacturer's supply chain describing the attributes and source of the validated material or product.
- Documentation from the manufacturing process that demonstrates effective control of Defined Source content materials during production.

6.1 Acceptable materials

The acceptability of materials validated for the environmental claim has to be audited for compliance with the Defined Source(s) selected for that material. The material shall meet the specific characteristics and requirements given in the other parts of the UL ECVP 2809 series of standards for the selected Defined Source(s). Depending on the material and the processes involved the procedures are intended to give further guidance on acceptable Defined Source Content materials claims.

6.2 Finished Product Details

6.2.1 The facilities within the scope of the claim shall submit documentation necessary for verifying the proposed claim(s).