



**EPEAT Clarification #32 Revision D
EcoLeaf Standards**

This Clarification applies to the following IEEE Standards and criteria:

Applicable Standards:

- IEEE 1680.1 – Personal Computers and Displays
- IEEE 1680.2 – Imaging Equipment
- IEEE 1680.3 – Televisions

Applicable Criteria:

4.5.2.1, 4.5.2.2, 4.7.3.1

PVC Determination: EcoLeaf environmental declarations for the following product categories that are published on the JEMAI website are conformant with criteria 4.5.2.1 and 4.5.2.2, and partially conformant with criterion 4.7.3.1:

- Electrophotographic Dry Process Photocopier (PSC-ID: AA)
- EP and IJ Printer (PSC-ID: AD-03 and PSC-ID: AD-04)
- Facsimile (PSC-IDA-03)
- Digital Printer-Duplicator (PCR-ID: AF-04)

Additionally, the following category that is published on the JEMAI website is conformant with criterion 4.5.2.1:

- Flatbed/Sheet-fed Scanner (PCR-ID: CA-01)

This clarification pertains to the Product Category Rules specified above. The Conformity Decision Panel (CDP) understands that other Product Category Rules (PCRs) may be shown to meet some EPEAT Criteria. Since not all PCRs have been reviewed, the CDP will examine evidence from Manufacturers who choose to provide evidence to support that all parts of a criterion are met by a PCR on a case by case basis.

Criteria 4.5.2.1 and 4.5.2.2 are product specific criteria so an EcoLeaf environmental declaration must be made for each product for which these criteria are claimed.

Background Analysis: The criteria 4.5.2.1, 4.5.2.2 and 4.7.3.1 all require some type of Life Cycle Assessment (LCA). EcoLeaf is a labeling system in Japan, which is in conformity to ISO type III environmental declarations (ISO 14025). The calculation methods of EcoLeaf's LCA is prescribed by ISO 14040/ ISO 14044.

EcoLeaf is administered by JEMAI (Japan Environmental Management Association for Industry). JEMAI is a member of GEDnet (Global Type III Environmental Product Declarations Network), which is an

international non-profit organization and established on a Japanese initiative by declaration organizations and practitioners in 1999.

The EcoLeaf Label includes three sections of documentation:

“(1) Product Environmental Aspects Declaration (PEAD). This section presents the main environmental impacts in an easy-to-understand manner based on PEIDS data. Required items include: Global warming load (CO2 equivalence), Acidification load (SO2 equivalence), and Energy consumption [MJ]. (See EcoLeaf labeling guidelines ([Page 17](#)) for more information).

(2) Product Environmental Information Data Sheet (PEIDS). The results of the LCA - Compiles the results of inventory analyses and impact assessments for all life cycle stages.

(3) Product Data Sheet (PDS). Collected Data - Gives product information and the energy and material mass inputs/outputs per life cycle stage and per unit product (LCA input data).

All lifecycle stages (all stages specified in the PEIDS of this program: manufacturing, distribution, use, discarding, and recycling).”

Note: A listing of secondary data sources is not mentioned but is part of the requirements for criterion 4.7.3.1.

Criteria Specific Comparison:

4.5.2.1 - Optional—Product specific greenhouse gas emissions – life-cycle assessment

This criterion requires the conduct of a cradle-to-grave assessment of greenhouse gas emissions for the declared product using one of several specified protocols.

Verification Requirements:

b) Identification of standard utilized - **Conformant**

Conformance Summary: In accordance to the EcoLeaf labeling guidelines ([Page 17](#)), GHG emissions is a required part of the information presented on the label. The EcoLeaf LCA calculations are prescribed by ISO 14040 and the label uses the ISO 14025:2006 standard.

The criterion requirement for the LCA to include the product life-cycle from cradle-to grave, from raw material extraction through the final disposal is fulfilled in the scope section of EcoLeaf’s Product-Specific Criteria for the following which have been approved by the CDP:

- Electrophotographic Dry Process Photocopier (PSC-ID: AA)
- EP and IJ Printer (PSC-ID: AD-03 and PSC-ID: AD-04)
- Facsimile (PSC-IDA-03)
- Digital Printer-Duplicator (PCR-ID: AF-04)
- Flatbed/Sheet-fed Scanner (PCR-ID: CA-01)

Other EcoLeaf product environmental declarations may qualify but standards were not available for review online at the time of this Clarification for review.

This criterion is **product specific**.

4.5.2.2 - Optional— Product specific greenhouse gas emissions — third party verification or making LCA assessment publicly available

This criterion requires making the assessment of greenhouse gas emissions in criterion 4.5.2.2 publicly available through specified ways.

Verification Requirements

b) Documentation of the assessment - **Conformant**

c) If third party verification was conducted, a document confirming that the process used to determine results of LCA assessment conducted under 4.5.2.1 were verified by an independent third party in conformance with ISO 14064 and ISO 14065 carbon accounting and verification standards, or another method referenced in one of the standards referenced in 4.5.2.1 (PAS 2050:2011, the GHG Protocol, ISO 14067, ISO14040/14044 or ISO 14025). The document shall include credentials and contact information of third party verifier. - **Conformant**

OR,

d) If the summary of results of the LCA assessment were made publicly available and results submitted into a national database: - **Non-conformant**

Conformance Summary:

As clearly stated in program documentation (<http://www.ecoleaf-jemai.jp/eng/data/JG-01-02.pdf>) on page 3, the Ecoleaf program PCRs adhere to the requirements of ISO 14025, 14040, and 14067, all of which are standards cited in the EPEAT 1680.2 criterion as acceptable reference standards, and thus allowable under this criterion as well. The protocol for review of EPDs is described on pages 13-15, as are the requirements for verifiers, which includes both training and testing.

The Ecoleaf program requires verification be performed in one of two ways: through a traditional review by an external 3rd party, or through system accreditation. "System accreditation" under Ecoleaf must follow a strict protocol and adhere to a set of established and comprehensive guidelines established by Ecoleaf, and must be confirmed through an independent outside system accreditation auditor. EPDs verified to the Ecoleaf requirements under either method meet EPEAT requirements under this criterion.

Option d) under the verification requirements is not applicable to this analysis.

This criterion is **product specific**.

4.7.3.1 Optional— Product life-cycle assessment and public disclosure of analyses

This criterion requires conduct of a cradle-to-grave life-cycle assessment for any one product covered under the scope of the standard in accordance with ISO 14044, and making the results publicly available in specified ways.

Verification Requirements:

b) Documentation of data contribution by the relevant database operator - **Non-conformant**

OR

c) Documentation of publication of LCA in peer-reviewed LCA journal or Environmental Product Declaration (EPD) label in accordance with the ISO 14025 standard – **Conditionally conformant**

1. Identification of the national database(s), or peer reviewed LCA journal, or EPD Type III label in accordance with ISO 14025 where the complete life-cycle assessment of at least one product, that is covered under the scope of this standard, has been submitted or published
2. Evidence of the submittal to the identified database/public disclosure system, publication in peer-reviewed LCA journal, or EPD label

Conformance Summary: The EcoLeaf label is published in accordance with an Environmental Product Declaration (EPD) Type III label as identified in the ISO 14025:2006 standard. The label section of the EcoLeaf webpage provides a database of all products with their LCA and raw data. In order for Manufacturers to claim this criterion, in addition to publishing an EcoLeaf EPD, Manufacturers must make secondary data sources used in the LCA publicly available, per the product criterion. This data can be made publicly available via a company website, a company annual report, a public database or other public disclosure systems. Additionally, the specific secondary data sources used for the underlying LCA may be included in newer EcoLeaf EPDs. To ensure Conformance, ensure the EcoLeaf EPD used to claim this criterion includes the specific secondary data sources used for the underlying LCA. See [Clarification #33](#) for more information.

This criterion is **not product specific**. Manufacturers may claim this optional criterion by meeting the requirements for any **one** product covered under the scope of the Imaging Equipment standard 1680.2.

Appendix:

EcoLeaf PCR Standards:

- Product-Specific Criteria for EP and IJ Printer (PSC-ID: AD-03) http://www.ecoleaf-jemai.jp/eng/pdf/ad_e_3.pdf

- Product-Specific Criteria for Electrophotographic Dry Process Photocopier (PSC-ID: AA) http://www.ecoleaf-jemai.jp/eng/pdf/aa_e.pdf
- Product-Specific Criteria for Facsimile (PSC-ID : AH-03) http://www.ecoleaf-jemai.jp/eng/pdf/ah_e_3.pdf
- Product Category Rules for Digital Printer-Duplicator (PCR-ID: AF-04) http://www.ecoleaf-jemai.jp/eng/pdf/af_e_4.pdf
- Product Category Rules for Flatbed/Sheet-fed Scanner (PCR-ID: CA-01) http://www.ecoleaf-jemai.jp/eng/pdf/ca_e_01.pdf

Change History:

Revision A approved by the Product Verification Committee, published, and effective on 09/25/2014.

Revision B (minor update) approved by Conformity Decision Panel on 11/11/2016.

Revision C (minor update) approved by Conformity Decision Panel on 02/03/2017.

Revision D (minor update) approved by Conformity Decision Panel on 03/17/2017.