

Part B: Product group definition v4.0

<p>What constitutes a product group (product category)?</p> <p>A product group consists of products that compete for/deliver the SAME function. Product group definitions use a functional performance requirement(s) that impacts/drives the potential environmental performance of the products in a product category as codified or specified in standards.</p> <p>From this baseline, each manufacturer can then demonstrate business advantage, competitive advantage, and differentiation.</p>	<p>Part A + Part B = PCR</p> <p>Part A: LCA calculation rules and report requirements Part B: Product group definition</p> <p>Transparency Report [EPD]™</p> <p>Both are names for ISO 14025 Type III environmental declarations. A Transparency Report™ is Sustainable Minds' brand of EPD. Part A provides the content requirements for reporting; any delivery format can be selected.</p>
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Part B: Product group definitions consist of nine sections:

- 1. Product group** (*identification of the product group/category*)

An appropriate and clearly defined product group (aka product category) is a critical part of understanding which products can use this Part B for declaring environmental performance. A product category is a group of products, elements, or systems that can fulfill equivalent functions.
- 2. Program operator responsibilities** (*how this definition works with other programs and requirements*)

Product group definitions must attempt to harmonize with other existing definitions and/or product category rules (PCRs). This section cites material use to support the development of this product group definition, justification for its development, commentary on harmonization and alignment with other programs or PCRs, and whether the definition meets the requirements of regulatory purchasing requirements.
- 3. Functional performance** (*what performance are customers buying and how the industry measures it*)

Performance is a measurable expression relating to the magnitude of a particular aspect of the product group relative to specified requirements, objectives, or targets. Every product group has its own (set of) performance parameter(s). A product group definition includes, when available, the functional performance parameters that are measurable and are codified or specified in a commonly accepted national standard. *Example: Insulation products are measured in R-values: 1 square foot of insulation per R-value point.* When necessary, excluded products will be identified.
- 4. System boundary** (*which unit processes are part of a product system*)

The scope of EPDs using the product group definition is defined by prescribing which life cycle stages are declared.
- 5. Functional/declared unit** (*how the performance of a product system can be quantified*)

A **functional unit** is the quantified performance of a product system. In other words, a functional unit defines the amount of service to be delivered by a product. The functional unit includes 1) an amount or quantity using SI-units; 2) a description of the application; and 3) the performance parameters, as many as relevant. After the functional unit is specified, the applicable region and a time period for which the performance is met (RSL) should also be described.

A **declared unit** is used instead of the **functional unit** when an LCA study does not cover the entire life cycle, but only certain modules (e.g., only 'cradle-to-gate'). The declared unit includes an amount or quantity using SI-units.

The functional/declared unit is used to express the results of the LCA for a given product group. **If different products do not fulfill the same performance, by definition they represent different product groups.**
- 6. Data quality and required data** (*required background data*)

Product groups often share common materials and processes. To limit the artificial variation of product environmental performance results due to the use of different background data, some product group definitions may require default data sets to be used.
- 7. Additional rules for comparability** (*to enhance the comparability of products within the same group*)

An EPD documents the LCA performance following the rules specified in the document **Part A: LCA calculation rules and report requirements**. Additional rules may be necessary to enhance the comparability between different products belonging to the same product group.

Conditions for adding rules include:

- A. Clarification:** When the rules in Part A are not clear when applied to a specific product group (aka product category), an interpretation may be in order to better define the rules applied to the product group. An interpretation request may be submitted to the Technical Advisory Board (TAB) for more details on product group parameters and reporting specifications.

- B. **Incompleteness of rules in Part A:** When the rules in Part A are incomplete when applied to a specific product group, the issuance of additional rule(s) may be in order. These could be added to Part B or be integrated into Part A.
- C. **Default life cycle stage scenarios:** The variation of parameters in the LCA that are expected to be relevant to the results (i.e., lead to a difference >10% in any impact category) can require a specific rule or scenario that is required to be used by all products in the group. Examples include scenarios for any life cycle stage that are not under direct control of manufacturers. This is especially true in the use stage of products.
- D. **Additional data quality requirements:** Data quality requirements specific to the product group may be needed in addition to those listed in Part A. Examples include whether certain secondary life cycle data should have priority, if applicable, and where data collection efforts should be focused within the life cycle.
8. **Additional LCA calculation rules** (*to specify conformance to additional standards or guidance*)
There may be circumstances where it is appropriate for the LCA to follow additional standards or guidance, either by the manufacturer's choice or as required. Substantiation is needed for why conformance is appropriate.
9. **Part B development information** (*transparent information about the development of the Part B*)
Product group definitions must be transparently developed in a non-biased way with an open consultation. This section lists the names and affiliations of the Part B review panel, the open consultation process information, a conflict statement, and contact information.

Parts A & B: How they work together

The intended application of the framework is to provide a common set of general LCA calculation rules, requirements, and guidelines applicable to any product to ensure that all Type III environmental declarations based on the framework are derived, verified, and presented in a harmonized and consistent manner.

An EPD presents the summary of the LCA background report, which includes quantified environmental information on the life cycle of a product in information modules. Modularity allows for a consistent and structured organization and communication of data and results throughout the life cycle of a product (in conformance to ISO 14025:2006 Clause 5.3).

Parts A and B establish the principles and specify the procedures for developing an EPD.

Applying the general rules of Part A together with the specific rules of a Part B creates an EPD. A verified EPD is an ISO 14025:2006 conformant Type III environmental declaration which communicates verifiable, accurate, and non-misleading environmental information for products and their applications. The creation, development, and their use is voluntary (in conformance to ISO 14025:2006 Clause 5.2). This program allows conformance to the American Center for Life Cycle Assessment (ACLCA) PCR Open Standard v1.0 (May 2022) as specified in each Part B.

Getting started

Anyone can request a new or updated Part B, as the template is a publicly available form. It can be filled out and submitted to Sustainable Minds, or the requestor can request that Sustainable Minds begins a draft on their behalf. This starts the PCR creation process. Here are some options for how to create Part B requests:

- **One company** submits a Part B request
- **An informal group of 2 or more** collaborates to create a Part B request
- **An industry group representative** creates or requests a strawman Part B and invites companies to review
- **A program operator** uses its own process to create and facilitate a stakeholder group

Sustainable Minds® Transparency Report [EPD]™ Program

Part B: Product group definition | <Product group name> | Part B #YY-###

This Part B conforms to the ACLCA PCR Open Standard version 1.0 (May 2022) at the following level:

1 Transparency 2 Procurement 3 Data source

Initiated by	<Organization(s) name & URL>		
Working group members	<List individual names and their relevant employer/entity affiliation>		
Public notices of development/ outreach	<List date & communication channel for each notice and outreach effort>		
Non-participating parties	<Explanation of interested parties that did not participate in the working group>		
New Part B?	<Yes / No>	Part B version number	<v1.0>
Publication date	<Date>		
Validity period	<5-year period beginning and end dates>		
Expected renewal schedule	Sustainable Minds intends to notify the working group and post update/renewal information on its website approximately four months prior to expiration to determine update, extension, or expiration options for this Part B.		

1. Product group

Name	<Name>	CSI MasterFormat® # Or other industry-appropriate classification, if applicable Examples provided not exhaustive	<Include all that apply>
Description	<Description of group of products, elements, or systems that can fulfill equivalent functions>		
Exclusions	<List specific exclusions from the product category>		
Geographic representativeness	North America		

2. Program operator responsibilities

Existing PCRs, EPDs, or LCAs	<List applicable literature and published material used to support development of the Part B.> • This Part B shall be used in conjunction with the <latest version> of Sustainable Minds Part A: LCA calculation rules and report requirements (version xxxx at the time of publication of this Part B) <...>
Justification for new Part B if relevant non-expired PCR exists	<If applicable, list relevant PCR(s) considered along with justification on why it is not being adapted, along with elements from the PCR that are included in this new Part B.>
Harmonization activities pursued	<Describe harmonization activities, including other program operators engaged and harmonization opportunities explored (e.g., joint development, merging, applying existing PCR, or adapting existing PCR), the relevant existing PCR(s), and whether a mutual recognition agreement exists between the relevant program operators.>
Alignment with other value chain PCRs	<List other relevant PCR(s) that represent products/materials upstream or downstream in the value chain, how alignment with those PCRs was considered, and the outcome of the alignment considerations. This must include difference in allocation rules, potential conflicts or inconsistencies, and how such differences were resolved.>

	<i>Note: This row may be deleted if the “Data source” level of conformance with the ACLCA PCR Open Standard is not desired/required.</i>
Relevant procurement requirements	This Part B has been confirmed to meet the requirements of the following federal and/or state procurement requirements: <List relevant requirements/legislation, if applicable. This row may be deleted if not relevant.>

3. Functional performance

Standard/certification (most recent edition, conformance not required for PCR conformance)	URL

4. System boundary

System boundary	<p>The type of EPD shall be specified as <specify scope: cradle to gate, cradle to gate with options, or cradle to grave>. The modules considered in the LCA shall be described in brief as per “System boundaries” outlined in ISO 21930:2017 section 5.2, and the system boundary shall follow both the modularity and polluter pays principle, discussed in greater detail in section 7.1.1 and Table 1. Module D <select inclusion, e.g., may be optionally declared>.</p> <p><Determine whether capital goods and infrastructure are included in system boundary. Example text below.></p> <p><i>This PCR considers capital goods and infrastructure to be any equipment, building, or supporting system which exists in the background of the <product category> and has a lifetime of at least two years or could be reasonably allocated across at least <1,000x the declared/functional unit> (a statement from the manufacturer to confirm this is sufficient and shall be documented in the LCA report). To reduce possible artificial variation in EPD results across the product group, capital goods and system infrastructure flows <shall be excluded from the system boundary by default, with justification required for alternative assumptions>.</i></p>
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5. Functional / declared unit

Unit	
Rationale	

6. Data quality and required data

Required background data sets	<p>The following default data sets shall be used to represent relevant background processes in the product system. Deviations shall be justified and based on the premise that another data set is more representative of the specific background process.</p> <ul style="list-style-type: none"> <List database/source, name of data set, version/year, as needed to explicitly identify required data sets not already prescribed by the addendum below.> For fossil fuels, transport, equipment, and electricity, the data sets listed in ACLCA PCR Open Standard addendum “Assessing Data Quality of Background Life Cycle Inventory Datasets”, Resource section, are acceptable. <p><i>Note: This is required for “Procurement” or “Data source” level conformance with ACLCA PCR Open Standard. Otherwise, this can be deleted.</i></p>
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7. Additional rules for comparability

<p>1. EPD types</p>	<div style="text-align: center; margin-bottom: 10px;">Manufacturing Specificity</div> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; background-color: #e6f2ff;">Multiple manufacturers</td> <td style="width: 25%; background-color: #e6f2ff;">Single manufacturer, multiple facilities</td> <td style="width: 25%; background-color: #e6f2ff;">Single manufacturer, single facility</td> </tr> <tr> <td style="background-color: #e6f2ff; vertical-align: middle;">Product Specificity</td> <td style="background-color: #e6f2ff;">Multiple products</td> <td style="background-color: #e6f2ff;">industry-average product-average</td> <td style="background-color: #e6f2ff;">manufacturer-average product-average</td> </tr> <tr> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;">Single product (or group of equivalent products)</td> <td style="background-color: #e6f2ff;">industry-average product-specific</td> <td style="background-color: #e6f2ff;">manufacturer-average product-specific</td> </tr> <tr> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;">facility-specific product-average</td> </tr> <tr> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;"></td> <td style="background-color: #e6f2ff;">facility-specific product-specific</td> </tr> </table> <p><Determine which EPD types may be developed. If industry-average EPDs may be developed, complete the industry-average EPD additional rules section.></p> <p><Determine whether supply-chain-specificity score calculation is desired for this product group.></p>		Multiple manufacturers	Single manufacturer, multiple facilities	Single manufacturer, single facility	Product Specificity	Multiple products	industry-average product-average	manufacturer-average product-average		Single product (or group of equivalent products)	industry-average product-specific	manufacturer-average product-specific				facility-specific product-average				facility-specific product-specific
	Multiple manufacturers	Single manufacturer, multiple facilities	Single manufacturer, single facility																		
Product Specificity	Multiple products	industry-average product-average	manufacturer-average product-average																		
	Single product (or group of equivalent products)	industry-average product-specific	manufacturer-average product-specific																		
			facility-specific product-average																		
			facility-specific product-specific																		
<p>2. Additional rules to Part A</p>	<ul style="list-style-type: none"> • EPDs that use secondary data for any unit process that contributes <X% or more, to be defined; ≤30% per the ACLCA open standard> to any disclosed environmental impact category shall disclose the data source (database name and version, LCA modeling software type and version implemented, dataset name, dataset geography, and dataset allocation method). This criterion applies to the LCI being used, and not the actual unit process data being reported by the manufacturer. Materials considered confidential may be reported as “proprietary ingredient” along with the database name and version. • <Determine a preferred allocation method for this product category (e.g., by mass, volume, labor hours, economic, etc.) and consider allocation protocols used by related adjacent product categories in the value chain. If allocation by physical relationship is used for this product group, specify the relevant underlying physical relationships to be considered.> • Any hazardous substances contained in the product shall be disclosed. For EPDs including products sold in the United States, the following regulations shall be considered when identifying hazardous substances. EPDs covering other countries should consider relevant standards or regulations in that market. <ul style="list-style-type: none"> ○ <Define applicable hazardous material regulations for this product group which are in addition to those listed in SM Part A> • <List any additional rules> 																				
<p>3. Default life cycle stage scenario(s)</p>	<p><Example scenario definitions for A3 & A4 below; define defaults for all life cycle stage scenarios></p> <p><u>Manufacturing (A3)</u></p> <p><i>Market-based renewable electricity purchases (including renewable electricity certificates (RECs)) <may be / shall not be> considered in the inventory <according to SM Part A>. RECs cannot be applied disproportionately to individual products.</i></p> <p><i>On-site renewable electricity <may be / shall not be> included in the inventory if renewable electricity certificates (RECs) are eligible; an eligible REC is one for which the company has maintained ownership of the renewable attributes and is retired as part of the renewable energy claim. <In such cases, the electricity shall be allocated to all products made at the facility (i.e., not disproportionately to a subset of products), unless the renewable installation is specifically connected to a portion of the plant and supported with submetering data.></i></p> <p><Address inclusion or exclusion of primary and secondary packaging.></p> <p><Address whether pre-products are applicable to the product group, define them, and specify whether they should be included in A1 or A3.></p>																				

	<p><u>Transport to site (A4)</u></p> <p><u>Land transport</u></p> <p><i>If primary data are unavailable, assume that the land transport distance in the destination country is <XX miles (XX km)> by truck with an empty return trip of the same distance. This includes transport to the final installation site if multiple transport legs are needed.</i></p> <p><u>Warehouse/distribution center and retail</u></p> <p><i>Energy consumption in warehouses, distribution centers, and retail facilities during the course of transportation to the final customer shall be <included in / omitted from> the analysis.</i></p>
4. Additional data quality requirements	<p><Optionally specify any additional method(s) appropriate for primary data collection (e.g., measured, calculated, estimated).></p> <p><Optionally specify additional type of uncertainty analysis to be performed in background LCA.></p>

8. Additional LCA calculation rules

N/A	Optional	Required	Indicate whether conformance is the manufacturer's choice or required for EPDs.
		X	ISO 21930:2017: conformance is required by construction product manufacturers
			<List any additional standards or sets of rules to which conformance is desired>

Industry-average EPD additional rules (optional)

Minimum participation	Example: The minimum required level of market participation is 50% of the North American market, measured by annual production volume.
Retroactive pathway requirements	Example: A manufacturer who did not participate in the original industry-average EPD submits their product-specific LCA primary data, under NDA, to the party responsible for collecting and averaging data for the industry-average EPD. The data must follow the Part B for the product group and be reviewed to make sure it can be used in the next update of the industry-average EPD. The manufacturers who submitted data may compare their EPDs to the industry-average EPD no sooner than 12 months after the industry-average EPD publication date. After a specified number or percentage of new participants submits data, an early update is forced, which is paid for by the new participants. The original participants may choose whether or not to update their data early. The party responsible for collecting and averaging data for the industry-average EPD shall maintain an ongoing list of manufacturers who submitted data to publicly contribute to the next update of the industry-average EPD.
Governance	<p>Example: Data submitted for the industry-average EPD shall be collected by a party independent of the participants and sponsor(s) of the EPD. The responsible party will be responsible for secure storage and analysis of the participants' data. The responsible party shall only share aggregated data with the participants and sponsor(s) of the EPD to protect confidential information of the participants.</p> <p>Companies eligible for participation in the EPD study shall be allowed to attend project meetings for which all participants are invited, regardless of whether the company decides to participate in the EPD.</p> <p>Also refer to ISO 21930 for more information about EPD ownership and responsibilities.</p>
Required or preferred background LCI data sets Include data set name and intended application	<p><Determine whether a specific background LCI data set is preferable or required for materials or processes which are consistently applied across the industry.></p> <ul style="list-style-type: none"> If use of a specific background data set is required, designate it with a clear and definitive explanation of why it is required. This explanation may include that the data set is required for the purpose of benchmarking. Required data sets shall be made available to participants in a format compatible with all software products used by the participants, in a way that produces the same results for the specified LCIA method and version number. Specific data sets shall only be required for materials or processes that are consistently applied across the industry.

	<ul style="list-style-type: none"> If use of a specific background data set is not required, the industry-average EPD may include multiple sets of impact assessment results using alternative data sets to better enable comparisons (e.g., a material is modeled using the same chemical represented by data sets from two separate databases).
Comparisons	<p><For industry-average EPDs intended to be used for comparisons, specify global warming plus at least two other impact categories to be used for comparisons. The impact categories should be selected based on EPD results normalized to national or regional per capita averages.></p> <p>Example: The participants of the industry-average EPD may determine the method used to determine quantitative uncertainty (e.g., Monte Carlo method). To demonstrate improvement, EPD results used for comparison must be statistically significantly lower than the industry-average EPD results, with a confidence interval of 95%. Any improvement or reduction that is not statistically significantly lower or higher than the benchmark, with a confidence interval of 95%, is considered equivalent to the benchmark.</p> <p>LCIA method & version # used for comparison: All comparisons to the industry-average results must use the same impact assessment characterization method and version number as the industry-average study.</p> <p>Threshold of performance improvement: Claims of improvement shall show at least 10%+ reduction in global warming and at least 5%+ reduction in two or more additional impact categories</p>
EPD updates	<p>Example: Updates to the industry-average EPD shall be made prior to the original end of the validity period if there are</p> <ol style="list-style-type: none"> 1) significant operational changes among the participants (e.g., technology, regulatory, or other changes that affect the efficiency of operations, method of manufacturing, the magnitude of input and output inventory flows, etc.), 2) Retroactive participants (see above), 3) significant changes to the industry supply chain, or 4) significant changes to scenario assumptions downstream of the manufacturing process. The EPD sponsor(s) and/or participants shall notify the Program Operator of any changes that could result in significant changes to the disclosed environmental performance results of the EPD. A significance threshold of 10% applies to these changes. The EPD owner(s) are responsible for determining whether this threshold has been reached.

9. Part B development information

Part B review panel	<p>This Part B was reviewed for conformance to <ISO 14025, ISO 21930:2017, and ACLCA PCR Open Standard v1.0> by the following parties:</p> <p><Add names, companies></p>
Open consultation	<p>Sustainable Minds solicited public comments on this Part B from <open date – close date>. This consultation period and list of parties to submit comments were made available to the review panel.</p>
Update justification	<p><i>Note: Complete this row only in the case of an update. Otherwise delete this row.</i></p> <p>This Part B was updated upon consideration of ISO 14027 and</p>
Conflict statement	<p>Funding sources used to develop this Part B were disclosed to the working group during the development process. The policies identified in Sustainable Minds' Program Governance were followed to identify and resolve any potential conflicts of interest.</p>
Sustainable Minds information	<p>This Part B was developed by Sustainable Minds and participating interested parties according to the Sustainable Minds Program Governance available at http://www.sustainableminds.com/transparency-report-program/how-it-works.</p> <p>For questions about this or another Part B, to submit comments on this Part B, or to obtain a template for developing a transparency report, contact us using the information on the following page: http://www.sustainableminds.com/contact-us.</p>

Part B revision history (applicable for version updates)

Version	Change log
1.0	<Publication date>: Original, published by <provide details>
<...>	<Date with revision notes>