العلامة الدولية الخضراء
INTERNATIONAL GREEN MARK

INTERNATIONAL GREEN MARK (IGM)
General Program Instructions Manual

EPD LABEL
Environmental Product Declaration Scheme

V 1.0 - JUN 2024

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GORD
المنظمة الخليجية للبحث والتطوير
GULF ORGANISATION FOR RESEARCH & DEVELOPMENT

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GORD

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1. INTRODUCTION

The program operator is the Gulf Organization for Research and Development (GORD), whose mission aims to foster innovation, advance knowledge, and build networks to enhance the sustainable built environment. GORD is the owner of the International Green Mark (IGM), a market-driven program aiming to produce transparent, reliable, and high-quality environmental information that contributes to achieving climate targets.

IGM targets the construction sector based in, but not restricted to, the MENA region. IGM offers a voluntary program for Type III environmental declarations in accordance with ISO 14025, following the standardized life cycle assessment (LCA) methodology outlined in ISO 14040/14044, and using EN 15804 as a core Product Category Rule (PCR). A Type III environmental declaration developed in the program is referred to as an Environmental Product Declaration (EPD).

IGM is primarily funded by the income from publishing, in addition to a smaller percentage from GORD's other centers of excellence.

This document constitutes the General Program Instructions (GPI) of the IGM EPD program's operation. The GPI is reviewed and updated on an annual basis.

2. PROGRAM OBJECTIVES AND SCOPE

The IGM EPD program aims to deliver a voluntary program for Type III environmental declarations that aims to:

- support product owners to communicate quantified and verifiable information regarding the environmental impacts across the life cycle of products,
- foster the growth of a market that drives the demand, and hence supply, of environmentally preferable construction materials and products,
- improve the availability of accurate, verifiable, and transparent life cycle-based environmental information,
- enable end-users to make well-informed decisions towards the selection of products with reduced environmental impact, and
- assess the environmental impacts of products over their life cycle to identify areas with potential for environmental performance improvement.

The program targets the construction sector and generates EPDs for any type of construction product from any manufacturer, distributor, or retailer in any country where there is a demand to communicate the environmental aspect of the product. The product is assessed in accordance with EN 15804.

The EPD is used in various applications, including but not limited to business-to-business and business-to-consumer communication. It is the responsibility of the organization making any claims to ensure that they are compliant with national laws or regulations in the relevant geographical area.

3. ENVIRONMENTAL PRODUCT DECLARATIONS: OVERVIEW

3.1 EPD Owners

EPDs are granted to manufacturing companies or authorized distributors of products upon completing the procedure of generating an EPD detailed in section 5 of this document. The EPD owner is responsible to:

- Hold sole ownership of the EPD and bear full liability and responsibility for all activities, use, and claims associated with the EPD.
- Compile all the necessary data[1], as outlined in the PCR, to conduct the LCA study, if the LCA is to be conducted by IGM,
- Inform the program operator of any updates with regards to contact or invoicing information,
- Monitor any changes across the life cycle that would require an update of the EPD during its period of validity and inform the program operator accordingly,
- Abide by the proper use of the EPD as specified in section 9.4 of this document.

3.2 Supported EPD Types

The program generates 2 different types of EPDs:

a. **Single Product EPD:** A description of the life cycle environmental performance of a single product produced by a single manufacturer. The product can be produced at multiple sites as long as it is manufactured by the same organization and marketed as the same product.

b. **Multi-product EPD:** A description of the life cycle environmental performance of multiple products made by the same manufacturer into one EPD. Similar products from a single or multiple manufacturing sites and manufactured by the same organization may be grouped into the same EPD if the products:

- Serve equivalent functions.
- Have similar performance ratings.
- Have similar use and end-of-life scenarios; averaging is only possible for A1-A3 modules.
- Are manufactured following similar major steps in core processes.
- Are manufactured using similar raw materials; proportions of the raw materials can vary.
- Differ by a maximum of 10% in the environmental performance indicators outlined in the PCR.

1 Data required for the LCA shall cover a minimum period of 1 year.

Group EPDs are allowed to declare only one set of results for the environmental performance indicators, which may be the results of one representative product, the average results of the products, or the worst-case results. The choice of the representative product shall be justified in the EPD, using, where applicable, statistical parameters.

3.3 EPD Validity Period

A published EPD is valid for a period of 5 years by default, starting from the date of the approval of the EPD. Throughout this period, a procedure should be set up by the EPD owner to monitor any changes throughout the product's life cycle that would require an update of the EPD during its period of validity. Changes can be monitored through a life cycle screening rather than a complete LCA study, focusing on the impactful parameters and indicators identified in the initial LCA and sensitivity analysis. The program operator retains the right to request documentation from the EPD owner at any given point during the validity period of the EPD to verify that no changes have been made to the main process of the system.

The EPD shall be updated and re-verified during its validity period if the identified changes have led to:

- An increase of 10% or more in any of the indicators resulting from the life cycle impact assessment (LCIA), and/or
- Significant changes in the declared product information, content declaration, or additional environmental, social, or economic information.

If such changes have occurred without informing the program operator or updating the EPD, the program operator reserves the right to withdraw the EPD.

Upon reaching the expiration date of the declaration, the EPD owner can apply for a renewal of the validity period. A life cycle screening is first conducted to check for any deviations in the most impactful parameters and indicators identified by the previously conducted LCA. If such deviations are detected, a new LCA study must be conducted using the updated process data, and the documentation shall go through the verification process again. If deviations are not detected, the EPD owner shall provide a document declaring that no changes have been made to the main processes of the system.

3.4 EPD Status Categorization

A published EPD can be categorized into one of the below states:

a. **EPD Valid:** An EPD that is registered and valid for its appointed time.
b. **EPD Expired:** An EPD that has reached the end of its validity.
c. **EPD Under Review:** An EPD that is being reviewed to resolve an ongoing dispute or to update the EPD to accommodate changes in the life cycle.
d. **EPD Withdrawn:** An EPD that has been withdrawn prior to its expiry date.

If an EPD is categorized into "Expired", "Under Review", or "Withdrawn", it will only be mentioned on the IGM website and will not be reflected on the EPD document. Such EPDs will still be publicly mentioned on the website but are no longer downloadable.

It is the responsibility of the applicant to follow the program's rules in the event of being categorized into one of the states.

3.5 Fee structure

The fees associated with an EPD application, LCA study, verification, registration, and publication are outlined on IGM's website and are reviewed annually.

4. CONTENT OF EPD DOCUMENT

The EPD document must be in line with the requirements and guidelines outlined in ISO 14020, ISO 14025, and EN 15804. The document shall be verifiable, accurate, relevant, and not misleading.

The format of the document shall be split into the following sections:

I. Cover page

- Product name and image
- Name and logo of the EPD owner
- Name and logo of program operator
- EPD registration number
- Date of publication and period of validity
- A statement of conformity with the latest versions of ISO 14025 and EN 15804.

II. General Information

a. Program information:
   - Program operator's address
   - Information about verification and the verifier
   - Identification of PCR
   - A statement that "environmental declarations from different programs may not be comparable."

b. EPD-owner information
   - Address and contact information of the EPD owner,
   - Description of the organization seeking the EPD,
   - Name and location of production site.

c. Product information
   - Product identification name/number,
   - Description of the product and its technical purposes.
   - Product reference standard,

- Product description and application/intended use,
- Product technical specifications,
- Product physical properties,
- Product composition,

Product components	Weight (kg)	% Material by mass	Material origin	Biogenic carbon content kg C/kg
Material 1				
Material 2				
...				
TOTAL				

- Statement whether the product contains content exceeding the limits for substances of very high concern (European Chemicals Agency).

d. LCA specifications and rules

- Functional unit / declared unit,
- Reference service life, where applicable,
- Temporal scope of data,
- Biogenic carbon content in the product and packaging, in kg C,
- Electricity mix used in production,
- Cut-off criteria,
- Allocation rules and assumptions,
- Reference to the main databases(s) and LCA software(s) used,
- Description of system boundaries,
- Main processes within system boundary, per life cycle module,
- System diagram,
- Additional information regarding relevant external sources for explanatory material

III. Environmental Performance Data

a. LCA impact results

- Mandatory impact category indicators according to EN 15804
- Additional impact category indicators
- Resource use indicators
- End-of-life: Waste
- End-of-life: Output flow

IV. Additional Information

a. Additional environmental information:

The EPD shall include, where relevant, additional environmental information that is not derived from the LCA, including but limited to:

- Hazard and risk assessment on human health and environment,
- Presence or absence of a material in the product that is considered of environmental significance,
- Preferred waste management options of product,
- Impacts and potential impacts on biodiversity and toxicity to the environment,
- The organization's adherence to any environmental management system, with a statement on where details can be found.

b. Additional economic and social information

The EPD may include relevant economic and social information as additional and voluntary information which may be related to the organization's activities in the sectors.

V. Information related to the EPD

a. Information related to average EPDs:

If grouping is included in the LCA, the following shall be added:

- The procedures and results used for grouping and/or averaging,
- The percentage of variation of grouped data,

- A statement that "conclusions and recommendations derived from grouping are based on value-choices",
- A justification of the criteria used for normalization and grouping,
- A statement that "ISO 14044 does not specify any specific methodology or support the underlying choices used to group the impact categories",
- A statement that "the value-choices and judgments within the grouping procedures are the sole responsibilities of the commissioner of the study".
- Differences with respect to previous EPD versions:
- For EPDs that have been updated, the following information shall be included:
- A description of the differences in the updated EPD, including a description of the percentage change in results and the main reason for the change,
- A revised date on the cover page

VI. Verification statement

A statement signed by the verifier to confirm that the EPD has been verified in accordance with ISO 14025, EN 15804, and ISO 14040/14044 by reviewing the EPD, LCA, foreground and background data, in addition to any relevant results documents.

VII. Bibliography

A reference section that includes all the sources and standards referred to in the EPD.

5. PROCESS OF DEVELOPING AN EPD

5.1 Conducting an LCA Study

An EPD is based on quantified life cycle data that are translated to reflect the environmental performance of the product. The LCA study can be performed by IGM's in-house LCA experts or with the help of a consultant with expertise in LCA and EPDs. The LCA study shall comply with:

a. The internationally standardized LCA methodology outlined in ISO 14040 and ISO 14044, and
b. The relevant PCR, and
c. The general rules set up for the purpose of EPDs in ISO 14025, and
d. Th is GPI document.

5.2 Developing the EPD Document

The results of the LCA study and the information specified in the PCR and GPI are compiled following the EPD format detailed in section 4 of this document.

5.3 Verification

Verification is carried out in accordance with the principles detailed in section 8 of this document.

5.4 Registration and Publication

Upon completing the verification procedure and submitting the required documentation, the EPD document is published on IGM's website, alongside the EPD registration number, the EPD owner's contact information, and the period of validity of the EPD. The publication date shall align with the date of receiving the verified documents.

The program operator may also publish the EPD in alternative formats or in managed databases to enable further use of EPD information.

Upon publication, the EPD may be used by the organization until it has expired or is categorized into "Under Review" or "Withdrawn", as specified in section 3.4 of this document.

6. LCA SPECIFICATIONS

The application of LCA in an EPD is guided by ISO 14040 and ISO 14044. Additional specifications are outlined in this section to improve comparability across products belonging to the same product category.

6.1 Allocation rules and assumptions

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. As per EN 15804, allocation is conducted in the following order:

a. Allocation should be avoided,
b. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small,
c. Allocation should be based on economic values using market prices averaged over a specified period of time.

6.2 System boundary

The system boundary of the product life cycle determines the processes to be included or excluded in the LCA. Specifications for the required system boundary are set in the PCR.

Product Stage			Construction Process		Use Stage							End of Life Stage				Benefits and Load Beyond the System Boundary
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw Material Supply	Transport	Manufacturing	Transport	Construction/Installation	Use Stage	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction Demolition	Transport	Waste Processing	Disposal	Reuse, Recovery and Recycling Potential

All environmentally relevant processes from "cradle to grave" (A1-A3, B1-B7, C1-C4, D) should be included, so that at minimum 99% of the total energy use, mass of product content, and environmental impact is accounted for.

For intermediate products or products with limited or unknown processing and/or end use data, the system boundary may be limited to "cradle to gate" (A1-A3, C1-C4). If end-of-life treatment is excluded, the following criteria shall be fulfilled according to EN 15804+A2:2019:

a. The product or material is physically integrated with other products during installation so they cannot be physically separated from them at end-of-life, and
b. the product or material is no longer identifiable at end-of-life as a result of a physical or chemical transformation process, and
c. the product or material does not contain biogenic carbon.

Omitting and not considering a life cycle stage shall be justified.

7. DEVELOPMENT OF PCRS

IGM's EPD program relies on EN 15804+A2:2019 as the single core PCR that supports the types of products listed in section 2 of this document. However, if further product categories are required, IGM would adopt readily available PCR documents from the same product category to facilitate PCR harmonization. If such a PCR is not available, it would be developed and adapted by IGM alongside the PCR review panel and open consultations with interested parties to ensure standard compliance and comprehensive rules.

The PCR document aligns with the content specified in ISO 14025 and would only require the information necessary to verify compliance and generate high-quality EPDs. The default period of validity of the PCR is four years, which is then reviewed and updated to adapt to market changes. Any interested party may send feedback and comments regarding a published PCR through IGM's communication email. Such comments may either be used to update the PCR during the period of validity or to contribute to the scheduled PCR update after expiration.

An expired PCR shall not be used to develop and register new EPDs and shall not be used to update a published EPD before updating the PCR or extending the validity period.

8. RULES FOR VERIFIERS

8.1 Principle of Verification

All the information gathered and produced to develop the EPD must be independently and impartially verified, typically by a third party. The independent verifier shall not be involved in the execution of the LCA nor in the development of the EPD to ensure impartiality and independence. The verifier shall not make any recommendations nor try to influence the EPD according to their opinion. The verifier can be a single person or a team of individuals, appointed by the program operator.

To overcome the risk of pressure from the applicant or the LCA practitioner on the verifier, the following procedures are enforced:

a. There is no direct contact between the verifier and the applicant,
b. The verifier shall be in contact with the LCA practitioner, strictly for clarification purposes, in a transparent and documented manner,
c. The payment shall be done in advance independent of the outcome of the verification,
d. The verifier shall report to the program operator any perceived pressure to influence the outcome of the verification.

The verifier shall not have a conflict of interest with any of the parties involved to guarantee the credibility of the verification process. If the verifier is later found to have had a conflict of interest or was not impartial, the published EPD shall undergo reverification and will be placed under the state of "EPD Under Review".

8.2 Qualification of Verifiers

Qualification is important to ensure a certain quality level of the verification process and of the final EPD. The verifier's competence is reflected according to the following criteria:

a. Over 5 years of practical experience as an LCA practitioner or verifier,
b. Previously cited as a primary verifier of a published EPD,
c. Holds up-to-date knowledge of the construction sector,
d. Competent and updated with the latest developments in EPD standards, including ISO 14025 and EN 15804,
e. Experienced with developing or verifying EPDs:
f. Experienced in auditing or verifying processes.

8.3 Requirements for Verification Procedure

The verification process shall focus on reviewing all the documents that justify input data and information included in the LCA study and EPD and assessing the validity of this data. Verification of the EPD shall confirm that the EPD and LCA study comply with the following:

- EN 15804,
- ISO 14025,
- ISO 14040/14044, and
- this GPI document.

The program operator shall provide a checklist to be used by the verifier for the verification report.

The verifier shall give a statement about the result of the verification, confirming at minimum:

a. The EPD addressed,
b. The work concerned is a verification,
c. The verification has been done by an independent third party,
d. The EPD and LCA study were verified according to EN 15804 (with the referenced version)
e. The PCR and, if relevant, c-PCR, which were applied for the EPD.

9. ADMINISTRATIVE PROCESSES

9.1 Data Confidentiality

Confidential business data is not disclosed publicly in the EPD and will be accessible exclusively to the program operator for ongoing examination of potential claims or inquiries related to the declarations. Additionally, confidential documentation supporting the declarations will be shared with third-party verifiers during the verification process and shall be treated with confidentiality. Verifiers are prohibited from disseminating or using, without the organization's permission, any information disclosed to them during the review process.

9.2 Data Management

The program adheres to the following data and version management practices:

- The GPI is reviewed and updated annually to ensure continuous compliance with relevant standards and updates.

- All published versions of the GPI are accessible on the program website.
- Every registered declaration document is versioned and a record of the publishing contributor is maintained.
- Verification checklists and documentation on input data are archived for each verified declaration.

9.3 Dispute Resolution

IGM welcomes any feedback regarding well-founded concerns about the quality, accuracy, or credibility of any EPD published by the program. Upon evaluation of the supporting information provided and the program operator's archives, the document in question could be placed under the state of "EPD Under Review" to implement the required corrective action or "EPD Withdrawn" if corrective action is not possible.

IGM has the right to request additional evidence from any party involved in developing an EPD to tackle concerns about the document's quality.

9.4 Use of EPD

The EPD owner shall abide by the proper use of the EPD document and its constituting information:

- The EPD document and IGM logo shall only be associated with products that have been registered within the program.
- The EPD document shall only be used when it is categorized as "Valid" on the IGM program website.
- Any information material that contains information derived from the results of the registered EPD document or associated to it in any way shall hold the IGM logo, after agreeing with the program operator.
- The IGM logo, along with the registration number and validity period, may be used on the registered product or packaging material for marketing purposes, after agreeing with the program operator.
- The EPD owner shall not make claims that imply the environmental preferability of the registered product solely by referencing the EPD document.

9.5 Avoiding Misuse

The EPD owner is liable to adhere to the terms and conditions set by IGM for the proper use of documents and must not use the EPD in a misleading way. If a breach in the use of an EPD document is identified, the program operator holds the right to de-register the EPD and place it under the state of "EPD Withdrawn", depending on the degree of misuse.

10. BIBLIOGRAPHY

- ISO 14025:2010, Environmental labels and declarations – Type III environmental declarations. Principles and procedures.
- ISO 14040:2006, Environmental management. Life cycle assessment. Principles and frameworks.
- ISO 14044:2006, Environmental management. Life cycle assessment. Requirements and guidelines.
- EN 15804:2012+A2:2019, Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

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