CONSTRUCTION INDUSTRY COUNCIL
建造業議會

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CIC GREEN PRODUCT CERTIFICATION

Assessment Standard

General Green Product

CIC GREEN
PRODUCT CERTIFICATION

(Version 2.0)

GENERAL GREEN PRODUCT

Summary of Assessment Criteria

A product to be assessed shall score at least 50 points in order to be awarded a "Green" Grade (i.e. a "pass") under the General Category.

Criteria	***Requirements***	***Verification***	***Points***	***Index***
CARBON				
Carbon Footprint Quantification	Conduct/provide carbon audit or equivalent for carbon footprint of products/materials	Carbon audit report with A1-A3 carbon footprint result	10	*4.1.1 (page 4)*
Carbon Footprint Management	Disclose carbon footprint reduction method	Documentation with substantiation (e.g. management plan)	10	*4.1.2 (page 4)*
RESOURCES				
Circularity	Submit product/material information for disclosure of recycle & reusable substrates	Documentation with substantiation (e.g. product catalogue/brochure)	10	*4.2.1 (page 5)*
Resources Management	Submit resources (energy/raw materials) management plan for the product production process	Documentation with substantiation (e.g. management plan)	10	*4.2.2 (page 6)*
PERFORMANCE				
Performance Quantification	Conduct energy audit/factory test or equivalent for assessing efficiency of products	Energy audit/factory test report for product with performance data (e.g. lm/W, COP, W/L/s)	10	*4.3.1 (page 6)*
Energy and Water Efficiency	Disclose energy & water performance indicator	Documentation with substantiation (e.g. product technical data sheet/ brochure)	10	*4.3.2 (page 7)*
INNOSMART				
Cyber Advancement	Disclose the data utilization, data visualization, data management and data processing features of the product	Documentation with substantiation (e.g. product catalogue/brochure)	10	*4.4.1 (page 7)*
Innovation	Provide innovation method for optimising system/equipment performance or minimising resources / carbon footprint during manufacturing	Documentation with substantiation (e.g. product technical information sheet or resource management plan)	10	*4.4.2 (page 8)*

ENVIRORMENT				
Toxicity & Hazard Substrates	Submit material safety data sheet for disclosure of toxic & harmful/health & safety substrates	Documentation with substantiation (e.g. MSDS)/ laboratory test report	10	*4.5.1 (page 9)*
Environmental Management	Submit solid & water waste management plan / environmental management certification for the production process	ISO 14001 Certificate or Documentation with substantiation (e.g. environmental management plan)	10	*4.5.2 (page 11)*
		Max Total:	**100**	

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1. INTRODUCTION

1.1 PURPOSE

The CIC Green Product Certification (CICGPC) is an environmental labelling scheme owned by the Construction Industry Council (CIC) and the Hong Kong Green Building Council (HKGBC) serving as the scheme operator. It aims to help consumers, building professionals and policymakers identify eco-friendly building materials and products that are environmentally preferable, low carbon and sustainable, thereby enabling informed decisions.

The General Category of the Scheme serves as a transitional category for materials and products that do not fit within the existing specific material/product categories under the scheme. This Assessment Standard (hereafter referred to as the "Standard") outlines the assessment criteria and benchmarks, governing the application process and the awarding of recognition under the Scheme. Additionally, the Standard also defines the verification methods used to determine which grade of recognition awarded to product based on the assessment criteria.

This Standard neither modifies nor supersedes existing laws and regulations. Compliance with this Standard does not substitute for, nor assure, compliance with any applicable laws or regulations. Adhering to all applicable laws and regulations is a prerequisite for the manufacturing and marketing of the product. As required by the Trade Descriptions Ordinance, the information provided must not be misleading. This commitment to transparency fosters demand for and supply of low-carbon products, stimulating the potential for continuous environmental improvement driven by market forces.

While compliance with all CIC Guides for the Green Product Certification is voluntary, adherence to all applicable laws and regulations is a prerequisite for marketing products under the CIC Green Product Certification.

For additional information, please contact our operator:

Hong Kong Green Building Council (HKGBC)
Phone: +852 3994 8888
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2. SCOPE

The scope of this Standard is applicable to all types of building materials intended for both the interior and exterior of building, as well as Mechanical, Electrical and Plumbing (MEP) products and renewable products not covered by the existing specific material/product categories under the scheme.

The category of building materials included, but is not limited to, all construction and architectural materials, as well as the interior finishes and products. The MEP product encompass all equipment and appliances related to centralized and decentralized building services installation, including corresponding control and monitoring platform, as well as the meters and instrumentations.

Other environmental innovative products and materials not covered by this standard may be considered for certification, provided they partially fulfills the requirements of relevant sections of this Standard.

This standard excludes all other building products and materials that have already been developed under this Scheme with specific product categories.

Each application is limited to **one product series** that shares similar compositions of raw materials, components, and formulations. Products within the same series, differing by model type and usage, may be included in a single application. Each application must specify the product code or model number.

Any individual product or group of products that can be assessed using the same criteria and yield the same assessment result may be considered a single application.

The ingredients of building materials that constitute **1% or more by weight** in relation to the assessment criteria must be detailed in the documentation, such as product information sheets or Safety Data Sheets (SDS). Components and operational media (e.g., refrigerants, phase change materials, inert gases, thermal coatings/paints, etc.) relevant to the assessment criteria must be clearly specified in each application. All related building products and materials must be listed in the submitted documents.

3. DEFINITIONS

Applicant: Organisations which apply for the label of the CIC Green Product Certification of the Construction Industry Council

CIC: Construction Industry Council

CAS: Chemical Abstract Service. Unique CAS numbers are assigned to chemical compounds

as a means of identification

CFC: Chlorofluorocarbons, refer to the class of organic compounds that contain only carbon, chlorine, and fluorine, produced as a volatile derivative of methane and ethane

CNAS: China National Accreditation Service for Conformity Assessment

HCFC: Hydrochlorofluorocarbons, refer to the class of organic compounds that contain only carbon, hydrogen, chlorine, and fluorine

HKAS: Hong Kong Accreditation Service

HKGBC: The Hong Kong Green Building Council Limited

HOKLAS: The Hong Kong Laboratory Accreditation Scheme

IARC: International Agency for Research on Cancer

ISO: International Organization for Standardization

SDS: Safety data sheet. To qualify as suitable, MSDS and information therein must not be more than 5-years old

Ozone depleting substances: The "scheduled substances" defined in Ozone Layer Protection Ordinance (Chapter 403).

Third-party: An entity without any financial interest or stake in the sales of the product or service being evaluated or other conflict of interest

4. EVALUATION CRITERIA

A product to be assessed shall achieve a minimum of 50 points in the "Selected Criteria" to be awarded a "Green" grade (i.e. a "pass") Label under the Scheme. All submission and documentation must be endorsed by the Chief Executive Officer or other authorized personnel of the Applicant to demonstrate compliance with the assessment criteria.

All certification, laboratory reports and documentation must remain valid throughout the assessment process and labelling period. The laboratory reports and documentation shall be no older than 5 years from the date of issue. Either a third-party laboratory or the manufacturer should conduct the chemical tests, provided they hold ISO17025 certification or relevant national accreditation systems, (e.g. HOKLAS, CNAS, etc.)

The CIC or an appointed third party reserves the right to request that applicants conduct random checks of the labeled product during the label's validity period. This may include, but is not

limited to, laboratory tests to verify compliance with specific criteria outlined in the Standard. Applicants shall bear the cost of any such random checks.

4.1 CARBON

4.1.1 Carbon footprint quantification

10 Points

The manufacturers shall provide documentation for A1-A3 carbon footprint for their products/materials, including but not limited to the following items:

1. A life cycle assessment report for quantifying and reporting the carbon footprint of products (CFP), covering at least A1-A3 in accordance with ISO 14067:2018.

   OR

2. An Environmental Product Declaration (EPD) for the A1-A3 carbon footprint of products/materials is reviewed and provided by a third party.

Verification
1. CFP quantification report in accordance with ISO14067:2018.
2. Environmental Product Declaration (EPD)

4.1.2 Carbon footprint management

10 Points

Methods forcarbon footprint reduction will be considered, including but not limited to the following items:

- Utilizing equipment manufactured locally within 800 km of the default coordinates of Hong Kong.
- Procuring or producing renewable electricity or clean energy, and/or addressing greenhouse gas emissions during the manufacturing process or at the local site during construction.

Verification
1. Documentation that substantiates the claims, including but not limited to catalogues or brochures that provide product information, such as country of origin and location of the manufacturing facility.
2. Documentation demonstrating the use of renewable electricity or clean energy.

4.2 RESOURCE

4.2.1 Circularity

10 Points

A recycling program for the product components is provided, including end-of-life advice and recommendations for typical deconstruction procedures, as well as declared options for reuse, recycling, recovery, and disposal of the product.

OR

The manufacturer has implemented effective waste management policies, procedures, and/or waste management programs covering manufacturing operations.

OR

All the moving parts and electronic components devices/installations are designed for disassembly and can be removed from their enclosure for cleaning, repair, replacement, or maintenance purposes.

Verification

Documentation of reuse, recycling and waste management of products should with substantiation including, but not limited to disclosure of recycle & reusable substrates, product catalogue, MSDS, and written declaration.

Documentation must provide substantiation, including a detailed plan and report with the following information:

a) Initiatives taken to reduce waste generation and improve recovery/recycling of waste;
b) Initiatives implemented for recovery of post-consumer and/or pre-consumer waste that can be re-introduced into the manufacturing process; and
c) Other environmental benefits or constraints associated with waste minimisation objectives and processes.

Documentation must include substantiation, such as a written declaration accompanied by date-stamped photographs.

4.2.2 Resources Management

10 Points

The manufacturer has implemented effective energy management policies and procedures, and/or an energy management program, which includes:

a) Initiatives to reduce energy use and improve energy efficiency; or
b) Requirements for suppliers or contract manufacturers regarding energy efficiency and management arrangements in the manufacturing process.

OR

For building materials with packaging, the packaging must be reusable or recyclable in the country, such as:

a) All plastic packaging must include a plastic identification symbol and should not contain halogenated plastics;
b) Packaging must not be impregnated, labeled, coated, or otherwise treated in a manner that would prevent or significantly limit recycling (e.g., metallic labels); or
c) Packaging must provide information on the materials used to facilitate identification and classification based on European Parliament and Council Directive 94/62/EC on packaging and packaging waste.

Verification

Documentation with substantiation, including but not limited to a detailed plan and report for the product production process.

Documentation with substantiation, including a written declaration and date-stamped photographs.

4.3 PERFORMANCE

4.3.1 Performance quantification

10 Points

The manufacturer of the applicant has conducted an energy audit, factory test, or equivalent assessment to evaluate the performance efficiency of the product;

Verification

Conduct an energy audit to assess the energy efficiency of the products and submit the results.

4.3.2 Energy and Water Efficiency

10 Points

Performance indicators (such as energy and water efficiency) are reported and follow the corresponding national and international standards (e.g., BS EN, ASMA, EU, CIBSE, ASHRAE, ISO/TG) as well as local regulations.

Verification

Products shall be tested based on the requirements stated in the relevant national and international standards and comply with local regulations related to product performance (such as energy and water efficiency).

Other testing methods are acceptable, provided that justification by the applicant. All energy and water performance indicators must be disclosed in the technical data sheet, brochure, or official website of the product.

4.4 INNOSMART

4.4.1 Cyber Advancement

10 Points

The product is able to:

Present evidence of the application of new practices, technologies, and/or techniques that are:

a) Not described in this manual;
b) Not widely implemented in the market;
c) Achieving multiple aspects of sustainability objectives, including:
    - **Identify** the sustainability objectives addressed by the proposed innovative applications.
    - **Detail** the methods and criteria used to evaluate the benefits and effectiveness of the applications (quantifiable performance indicators should be proposed if applicable).
    - **Provide evidence** of the implementation of these applications.
    - **Evaluate** preliminary achievements.

OR

Communicate with a Building Management System (BMS) via an open standard communication interface, including but not limited to BACnet, Modbus, ZigBee, and LonWorks, for controlling and monitoring from the BMS.

OR

Adopt Multi-Trade Integrated MEP (MiMEP) technologies to facilitate improvements, including but not limited to BIM, Virtual Reality, RFID, and Augmented Reality, to enhance efficiency and streamline manufacturing processes within MiMEP.

Verification

Documentation with substantiation including but not limited to disclose the data utilization, data visualization, data management and data processing features of the product.

4.4.2 Innovation

10 Points

The manufacturer has demonstrated intelligent manufacturing that contributes to sustainability, such as:

a) Tracking and displaying real-time data on energy consumption, resource utilization, and waste reduction during production.
b) Showcasing the use of Industrial Internet of Things (IoT) technologies to optimize manufacturing efficiency.
c) Highlighting automated quality control measures that minimize defects and reduce material waste.
d) Employing technologies that enhance sealing and bonding products with features like super durability, temperature sensitivity, and other excellent properties, allowing for more intelligent production methods.

OR

The product is intelligent, featuring durable surface coatings, smart paving systems, and incorporating Artificial Intelligence (A.I.) and Machine Learning (ML) capabilities, as well as Virtual Reality (VR) and Augmented Reality (AR) applications in operation, along with Internet of Things (IoT) platform integration.

Verification

Documentation with substantiation must include, but is not limited to, details on innovative methods for optimizing system or equipment performance and minimizing resource use or carbon footprint.

4.5 ENVIRONMENTAL

4.5.1 Toxicity & hazard substrates

10 Points

The product does NOT contain:

Any substances (such as reproductive toxins/endocrine disruptors – R60, R61, R62, R63, or R64; harmful substances – R20, R21, or R22; toxic substances – R23, R24, or R25; very toxic substances – R26, R27, or R28; or substances causing sensitization – R42 or R43) that are present at a concentration equal to or greater than 0.1% by weight of the product, in accordance with Commission Directive 2001/59/EC and Regulation (EC) No 1272/2008 of the European Parliament and of the Council

OR

Any carcinogenic substances listed in the International Agency for Research on Cancer (IARC) Groups 1, 2A, and 2B classifications that are known to be present as contaminants or at concentrations of less than 0.1% by weight of the product during the production process or in the final product.

OR

Hazardous substances (such as isoaliphates; 1,3-butadiene; bisphenol A; toluene and toluene compounds; epichlorohydrin; N-methyl-2-pyrrolidone; glycol ethers; crystalline quartz silica (CAS 14808-60-7); and alkylphenolic compounds) that are present at a concentration equal to or greater than 0.1% by weight of the product.

OR

The concentration of heavy metals (such as cadmium, lead, chromium VI, mercury, etc.) must be less than 0.01% by weight of the product. The concentration of barium (excluding barium sulfate) or its compounds shall be less than 0.1% by weight of the product.

OR

The concentration of phthalates (such as benzyl butyl phthalate (BBP), dibutyl phthalate (DBP), di-(2-ethylhexyl) phthalate (DEHP), diisononyl phthalate (DINP), diisodecyl phthalate (DIDP), and di-n-octyl phthalate (DNOP)) in the product must be less than 0.1% by weight.

OR

The concentration of formaldehyde must be less than 0.01% by weight of the product.

OR

The product must not contain any ozone-depleting substances regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer, and the concentration must not exceed 0.1% by weight. Additionally, any substances with a global warming potential (GWP) lower than 150, as determined by the US Environmental Protection Agency (EPA), must also comply with the following requirements for refrigerants:

a) The safety group of the refrigerant must be A1 or A2L according to ASHRAE 34-2013; or
b) The safety group of the refrigerant may be B1 or B2L according to ASHRAE 34-2013 if the refrigerant leakage rate is equal to or less than 0.5%.

Verification
Documentation related to the relevant information mentioned above, including but not limited to:

Safety Data Sheet (MSDS): Submit the MSDS to disclose toxic and harmful health and safety substrates. All information provided in the MSDS must be substantiated with corresponding laboratory test reports declared by the manufacturer of the applicant.

Laboratory Test Reports: Test reports must be compiled according to national and international testing methods, including but not limited to:

- ISO 3856-1 or ASTM D3335 for lead
- ISO 3856-4 or ASTM D3335 for cadmium
- ISO 3856-5 for hexavalent chromium
- ISO 3856-7 or ASTM D3624 for mercury

Additional Laboratory Testing: Test reports must also adhere to national and international testing methods, including but not limited to CPSC-CH-C1001-09.3.

Further Laboratory Testing: Test reports must comply with national and international testing methods, including but not limited to ASTM D5910 – 05 (2012).

Refrigerant Testing: Laboratory test reports and relevant production documentation must include testing performed using the Gas Chromatography-Mass Spectrometry (GC-MS) method, in accordance with ISO 17895 and ISO 11890. Additionally, provide documentation related to the refrigerant used, refrigerant leakage rate, and loss and charge. The leak testing methods must be selected according to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Guideline 3-1990, Section 6.4.2, which focuses on reducing emissions of refrigerants in refrigeration and air-conditioning equipment and application.

[1] *Commission Directive 2001/59/EC:* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:225:0001:0333:EN:PDF
Regulation (EC) No 1272/2008 of the European Parliament and of the Council: http://eur-lex.europa.eu/eli/reg/2008/1272/oj

4.5.2 Environmental Management System

10 Points

The manufacturer of the products shall possess valid certificate of ISO 14001 or the EU Eco-Management and Audit Scheme (EMAS). Targets shall be set to reduce the environmental impacts during the manufacturing process which include but not limited to the reduction of hazardous substance emissions, energy consumption, CO_2 emissions, secondary environmental load, waste management, water management, etc.

Verification

A valid ISO 14001 or EMAS Certificate issued by local or overseas accredited certification body, along with water waste management plan for the production process.