CONSTRUCTION INDUSTRY COUNCIL
建造業議會

CONSTRUCTION INDUSTRY COUNCIL

CIC GREEN PRODUCT CERTIFICATION

Assessment Standard

Synthetic Carpet

CIC GREEN
PRODUCT CERTIFICATION

(Version 2.0)

Synthetic Carpet

Summary of Assessment Criteria

CORE CRITERIA

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<tr><td>Product Information</td><td>Provide following information with delivered products or made accessible to public:
• Basic product specifications
• Intended use of the product
• Instructions for correct use and storage to maximize the lifetime of the product
• Recommended maintenance instructions for the product
• Installation method
• Recommend use of low VOC adhesive
• Instructions for consumer product disposal
• Country of origin</td><td>Documentation including but not limited to product catalogue, technical datasheet, webpages</td><td>5</td><td>-</td><td>4.1.1</td></tr>
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Each product should contain recycled content (i.e. post-industrial and/or postconsumer waste) as listed below

<table><tr><th rowspan="2">Points</th><th colspan="2">Category</th></tr><tr><th>Face Fibre</th><th>PVC / Non PVC Backing</th></tr><tr><td>10 Basic</td><td>≥ 20%</td><td>≥ 20%</td></tr><tr><td>+5 Bonus</td><td>≥ 50%</td><td>≥ 50%</td></tr><tr><td>+10 Bonus</td><td>≥ 70%</td><td>≥ 70%</td></tr></table></td><td>Material summary report</td><td>10</td><td>+5/+10</td><td>4.3.1.1</td></tr>
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<tr><th>Basic</th><th>+Bonus</th></tr>
<tr><td></td><td>Flame Retardants:
Following chemicals shall not be employed ⩾ 0.1% by weight in the product:
• Polybrominated diphenyl ether (PBDEs)
• Polybrominated biphenyls (PBBs)
• Short-chained chlorinated paraffin (SCCPs)
• Hexabromocyclododecane (HBCD)</td><td>Laboratory test report(s)</td><td>5</td><td>-</td><td>4.4.3.4</td></tr>
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<table><tr><th>Compounds</th><th>CAS</th><th>μg/m^3</th></tr><tr><td>Acetaldehyde</td><td>75-07-0</td><td>70</td></tr><tr><td>Benzene</td><td>71-43-2</td><td>30</td></tr><tr><td>Caprolactam</td><td>105-60-2</td><td>70</td></tr><tr><td>2-Ethylhexanoic Acid</td><td>149-57-5</td><td>25</td></tr><tr><td>1-Methyl-2-</td><td>872-50-4</td><td>160</td></tr><tr><td>Naphthalene</td><td>91-20-3</td><td>4.5</td></tr><tr><td>Nonanal</td><td>124-19-6</td><td>13</td></tr><tr><td>Octanal</td><td>124-13-0</td><td>7.2</td></tr><tr><td>4-Phenylcyclohexene</td><td>4994-16-</td><td>27</td></tr><tr><td>Styrene</td><td>100-42-5</td><td>220</td></tr><tr><td>Toluene</td><td>108-88-3</td><td>150</td></tr><tr><td>Vinyl Acetate</td><td>108-5-4</td><td>100</td></tr></table></td><td>Laboratory test report(s)</td><td>5</td><td>-</td><td>4.4.4.2</td></tr>
<tr><td colspan="6">PERFORMANCE</td></tr>
<tr><td>Product Life</td><td>Serviceability:
Quality, durability and performance properties of the product shall be demonstrated through at least FIVE testing items (as applicable to material type)</td><td>Laboratory test report(s)</td><td>10</td><td>-</td><td>4.5.1.1</td></tr>
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</table>

NON-CORE CRITERIA

Criteria	Requirements	Verification	Points +Bonus	Index
CARBON				
CFP quantification	Provide a life cycle assessment report with the carbon footprint of products (CFP), covering at least A1 to A3 endorsed by a third-party critical review *OR* provide an Environmental Product Declaration (EPD).	CFP quantification report **OR** Environmental Product Declaration (EPD)	+5/ +10	4.2.1
RESOURCE				
Circularity	Recyclability: Developed a recycling plan for the product and declared options for reuse, recycling, recovery and disposal. The plan shall include the following and made available to public.	Recycling plan	+5	4.3.2.1
	Packaging Requirement: The packaging materials shall not contain halogenated plastics; *OR* Shall be comprised of 100% recycled materials, readily recyclable materials or decomposable materials: *OR* shall not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent or significantly limit recycling.	Documentation on packaging materials used	+5	4.3.2.2
Waste Management	Waste Management Plan: Implement effective Waste Management Plan detailing the policies, procedures and/or a waste management program covering manufacturing operations.	Waste management program	+5	4.3.3.1
Water Management	Option A: Water Consumption Reporting: Report both potable and non-potable water usage in the production process of the past year.	Water consumption report	+5/ +10	4.3.4.1
	Water Recycling Program: Develop and implement water recycling program during the manufacturing process.	Documentation on water recycling		4.3.4.2
	Option B: Water Management System: Process valid certificate under ISO 14046: Water Footprint Assessment	ISO 14046 Certificate issued by accredited certification body		4.3.4.3

Criteria	Requirements	Verification	Points +Bonus	Index
Energy Management	Option A: Energy Management Plan: Implement effective energy management policies and procedures and/or an energy management programme.	Energy management plan	+5/ +10	4.3.5.1
	Option B: Energy Management System: Possess valid certificates under ISO 50001: Energy management systems	ISO 50001 Certificate issued by accredited certification body		4.3.5.2
ENVIRONMENT				
Environmental Management	Environmental Management System: Possess valid certificate under ISO 14001: Environmental management systems or EU Eco-Management and Audit Scheme (EMAS).	ISO 14001 or EMAS Certificate issued by accredited certification body	+5	4.4.1.1
Regional Product	Regional Product: Products that are manufactured within 800km radius of HKSAR by road transportation; within a 1,600km radius by rail transportation; or within a 4,000km radius by sea transportation.	Location map	+5	4.4.2.1
Human Toxicity and Ecosystem Impact	Hazardous Substances: Concentration of the hazardous substances in the product shall be below 0.1% by weight of the product.	Laboratory test report(s) or self-declaration letter	+5	4.4.3.1
	Plasticisers: Concentration of phthalate in the product below 0.1% by weight of the product. The limited phthalates including the following types: • Bis(2-ethylhexyl)phthalate (DEHP) • Dibutyl phthalate (DBP) • Benzylbutylphthalate (BBP) • Diisononylphthalate (DINP) • Diisodecylphthalate (DIDP) • Di-n-octylphthalate (DNOP)	Laboratory test report(s)	+5	4.4.3.3
INNOSMART				
Innovations & Additions	Adopt new practice, technology and strategy. *OR* Achieve exemplary performance	Narrative with supporting	+5	4.6.1
		Subtotal:	+70	

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1. INTRODUCTION

1.1 PURPOSE

The CIC Green Product Certification Scheme (the "Scheme") is a green product labelling scheme, owned by the Construction Industry Council (CIC) and implemented by the Hong Kong Green Building Council (HKGBC). The primary goal of the scheme is to support Hong Kong's transition to a low-carbon economy by encouraging the adoption of environmentally friendly construction practices.

With the Green Product Certification, various stakeholders, including consumers, building professionals, construction practitioners and policymakers, can easily and unequivocally identify environmentally preferable construction materials and building products. This certification serves as a reliable indicator of a product's sustainability, helping to drive market demand for greener options.

To ensure the credibility and effectiveness of the certification, the CIC and the HKGBC has jointly developed this Technical Assessment Standards (the "Standard"), which sets out the assessment criteria and their benchmarks to govern the application and award of a label under the Scheme. The comprehensive assessment evaluates the overall sustainability of construction materials and building products across multiple dimensions. These dimensions include environmental impact, resource efficiency, technical performance, and the use of smart manufacturing technologies.

The Standard is divided into two main parts:

- General Requirements (Refer to General Requirements provided in separate document). This part introduces Scheme's framework, outlines the application procedure, and details the grades.

- Technical Requirements (This document refers). This part defines the principles, requirements and guides for quantifying and reporting the products' carbon footprint (CFP), along with other sustainability assessment criteria and scoring standards.

This Standard neither modifies nor supersedes laws and regulations. Compliance with this Standard is not a substitute for, and does not assure, compliance with any applicable laws or regulations. Compliance with all applicable laws and regulations is a prerequisite for the manufacturing and marketing of the product.

1.2 BACKGROUND

Synthetic carpet can place a significant burden on the environment, from raw material extraction to potential health hazards in the use phase. With increasing environmental claims of synthetic carpet in the market, a more comprehensive and systematic approach to assess the environmental impacts of the synthetic carpet shall be developed. The aim of this Standard is to help designers and end-users choosing greener products by conserving resources, reducing the amount of waste disposal in landfills and reducing the impact to human health throughout the life cycle of synthetic carpet. The development of the assessment criteria in this Standard has made references to worldwide relevant eco-labelling schemes and some existing life cycle assessment (LCA) studies.

2. SCOPE

This Standard applies to various carpet types and their components, including face fibre, cushion, backing, and adhesives.

Materials: Covered materials include synthetic fibres (nylon, polypropylene, polyester, acrylic), natural fibres (wool, jute, sisal), and hybrid blends.

Carpet Types and Applications: This Standard includes functional carpets (e.g., antimicrobial, flame retardant) for healthcare, hospitality, and high-traffic commercial spaces; modular designs for offices and public areas where easy maintenance is essential; and residential carpets for home use.

Application Requirements: Each application must specify materials, including face fibre and backing. A single application may cover one series with varying sizes, colours, or shapes.

Subsequent Applications: Up to five additional applications are permitted for the same series and specifications during the label validity period.

Note:

Each application should specify the product code / serial number.

3. DEFINITIONS

Applicant:	Organisation which applies for the label under the CIC Green Product Certification of the Construction Industry Council
ASTM:	American Society for Testing and Materials
BS:	British Standards
CIC:	Construction Industry Council
CNAS:	China National Accreditation Service for Conformity Assessment
EMAS:	Eco-Management and Audit Scheme (EMAS) is an environmental management tool which enables organisations to assess, manage and continuously improve their environmental performance.
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 Organisation for Standardisation
MSDS:	Material safety data sheet. To qualify as suitable, MSDS and information therein must not be more than 5-years old
Post-consumer recycled content:	Consumer waste, generated by end-users and can no longer be used for its intended purpose. Examples include construction and demolition debris, materials collected through recycling programs, discarded products (e.g., furniture, cabinetry, decking), and landscaping waste (e.g., leaves, grass clippings, tree trimmings).
Pre-consumer recycled content:	Recycled content comes from process waste that is used to make a different product.
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
US EPA:	United States Environmental Protection Agency
VOC:	Volatile organic compounds. Any organic compound (compound which contains carbon) with either a boiling point below 250°C measured at 101.3 kPa or a vapour pressure of more than 0.1 mm Hg measured at 25°C

4. EVALUATION CRITERIA

A product to be assessed shall meet all the minimum requirements of the "Core Criteria" in order to be awarded a "Green" (i.e. a "pass" grade) Label under the Scheme. Bonus points may be awarded if the product meets the "Non-core Criteria". "Bronze", "Silver", "Gold" or "Platinum" Label will be awarded according to the total points accumulated, as shown in Table 1.

Table 1 Benchmarks for grading

Points achieved	Grade to be awarded
90 or above	Platinum
80 – 89	Gold
70 – 79	Silver
60 – 69	Bronze
50 – 59	Green
Below 50	No label

All submissions and documentations shall be endorsed by the Chief Executive Officer or other authorised persons of the Applicant to demonstrate conformance to the assessment criteria. All certification, laboratory report and documentation must be valid during the assessment process and labelling period. The validity of all laboratory report and documentation shall be within 5 years from the date of issue. The chemical tests should be conducted by either a third party or the manufacturer, providing that they have obtained ISO 17025 certification or relevant national accreditations, such as HOKLAS or CNAS.

4.1 BASIC INFORMATION

4.1.1 Product Information – Core Criteria

The Applicant is required to achieve 5 Basic Points under this section.

Requirements

5 Basic Points for providing following information with delivered products or made accessible to public:

- Basic product specifications
- Intended use of the product
- Instructions for correct use and storage to maximize the lifetime of the product
- Recommended maintenance instructions for the product
- Installation method
- Recommend use of low VOC adhesive
- Instructions for consumer product disposal
- Country of origin

Verification

Documentation including, but not limited to, product label, product catalogue, MSDS, and written declaration.

4.2 CARBON

4.2.1 CFP Quantification – Non-core Criteria

The Applicant can achieve maximum 10 Bonus Points under this section.

Requirements

5 Bonus Points for providing life cycle assessment report for quantifying and reporting the carbon footprint of products (CFP), covering at least A1 (raw material supply), A2 (transport) and A3 (manufacturing process).

OR

10 Bonus Points for providing the product's CFP value from a product level EPD issued in accordance with ISO 14025:2006, ISO 14067:2018, ISO 21930:2017, GB/T 24067-2024 or BS EN 15804:2012.

Verification

Either of the following documents shall be provided for verification.

CFP quantification report endorsed by a third-party critical review, in accordance with ISO 14067:2018 or equivalent

OR

Environmental Product Declaration fulfilling the above requirements

4.3 RESOURCE

4.3.1 Material Optimization

The Applicant is required to achieve 10 Basic Points under this section. Additionally, the Applicant can achieve maximum 10 Bonus Points under this section.

4.3.1.1 Raw Material – Core Criteria

Requirements

Applicant shall provide a detailed breakdown of materials/ content used in both face fibre and backing for compliance. Each product should contain recycled content (i.e. post-industrial and/or postconsumer waste) as listed below.

Table 2 Requirement for Total content of "materials with recycled content, renewable materials and biodegradable materials" by weight (%)

Points	Category	
	Face Fibre	PVC / Non PVC Backing
10 Basic	≥ 20%	≥ 20%
+5 Bonus	≥ 50%	≥ 50%
+10 Bonus	≥ 70%	≥ 70%

Verification

Documentation including, but not limited to, product catalogue, MSDS and written declaration.

4.3.2 Circularity

The Applicant can achieve maximum 10 Bonus Points under this section.

4.3.2.1 Recyclability – Non-core Criteria

Requirements

5 Bonus Points for demonstrating that the manufacturer has developed a recycling plan for the product and declared options for reuse, recycling, recovery and disposal. The plan shall include the following and made available to public.

- Designate all homogeneous materials in the product as being intended for technical and/or biological cycles and define the intended cycling pathway(s) for each material.
- Identify potential partners for product reuse, recycling, recovery in accordance with the intended cycling pathway(s).

- For products and materials intended for municipal recycling, the product and/or material must be compatible for municipal cycling systems (e.g., painted plastics and plastic laminated paper are not currently compatible for municipal recycling).
- Instructions for how to cycle the product shall be made publicly available.

Verification

Documentation of recycling plan, including, but not limited to product catalogue, MSDS and written declaration.

4.3.2.2 Packaging Requirements – Non-core Criteria

Requirements

5 Bonus Points for minimizing the wastage from all primary packaging materials. The packaging materials shall achieve either of the followings.

The packaging materials shall not contain halogenated plastics

OR

The packaging materials shall be comprised of 100% recycled materials, readily recyclable materials or decomposable materials

OR

The packaging shall not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent or significantly limit recycling.

Verification

Documentation describing the packaging materials used as well as their chemical composition (if any and where applicable), treatment process and recyclability.

4.3.3 Waste Management

The Applicant can achieve maximum 5 Bonus Points under this section.

4.3.3.1 Waste Management Plan – Non-core Criteria

Requirements

5 Bonus Points for implementing effective waste management plan detailing the policies, procedures and/or a waste management program covering manufacturing operations. The waste management plan should include but not limited to the following information:

- Initiatives taken to reduce waste generation and improve recovery/recycling of waste
- Initiatives implemented for recovery of post-consumer and/or pre-consumer waste that can be re-introduced into the manufacturing process and

- Other environmental benefits or constraints associated with waste minimisation objectives and processes.

Verification

Documentation of waste management programme.

4.3.4 Water Management

The Applicant can achieve maximum 10 Bonus Points under this section.

The Applicants can select one of the options below and comply with any or all the requirements under that option to achieve associated points. Each option is eligible for a maximum 10 Bonus Points.

Option A:

4.3.4.1 Water Consumption Reporting – Non-core Criteria

Requirements

5 Bonus Points for reporting both potable and non-potable water usage in the production process of the past year.

Verification

Water consumption report, support by water usage data acquired from water meter, water sub-meter, water bill or other equivalent documents.

4.3.4.2 Water Recycling Program – Non-core Criteria

Requirements

5 Bonus Points for developing and implementing water recycling program during the manufacturing process.

Verification

Documentation demonstrating the implementation of water recycling program, support by drawings, water usage data acquired from water sub-meter or other equivalent documents.

Option B:

4.3.4.3 Water Management System – Non-core Criteria

Requirements

10 Bonus Points for possessing valid certificate under ISO 14046: Environmental management – Water footprint – Principles, requirements and guidelines.

ISO 14046 is a framework for assessing the water footprint of products, processes, and organizations. It provides principles, requirements, and guidelines for conducting and reporting water footprint assessments. It helps organizations evaluate and improve their water management practices.

Verification

A valid ISO 14046 certificate issued by accredited certification body.

4.3.5 Energy Management

The Applicant can achieve maximum 10 Bonus Points under this section.

The Applicants can select one of the options below and comply with any or all the requirements under that option to achieve associated points.

Option A:

4.3.5.1 Energy Management Plan – Non-core Criteria

Requirements

5 Bonus Points for implementing effective energy management policies and procedures and/or an energy management programme, including but not limited to the following items:

- Energy efficiency initiatives: Manufacturer should undertake specific initiatives to reduce energy use and improve energy efficiency throughout their operations. This could include upgrading to more efficient equipment, optimizing production processes, or implementing energy-saving technologies
- Supplier requirements: Manufacturers should extend their energy management efforts to their supply chain by establishing requirements or initiatives for suppliers and contract manufacturers to improve their energy performance where possible

Verification

Documentation of energy management plan detailing the above, supported by organizational policy or other equivalent documents.

Option B:

4.3.5.2 Energy Management System – Non-core Criteria

Requirements

10 Bonus Points for possessing valid certificate under ISO 50001: Energy management systems — Requirements with guidance for use.

ISO 50001 provides a framework for organizations to establish, implement, maintain, and improve an Energy Management System. The goal is to help organizations improve their energy performance, increase energy efficiency, and reduce energy costs and greenhouse gas emissions. By achieving ISO 50001 certification, manufacturers can demonstrate their commitment to energy efficiency and sustainability

Verification

A valid ISO 50001 certificate issued by accredited certification body.

4.4 ENVIRONMENT

4.4.1 Environmental Management

The Applicant can achieve maximum 5 Bonus Points under this section.

4.4.1.1 Environmental Management System – Non-core Criteria

Requirements

5 Bonus Points for possessing valid certificate under ISO 14001: Environmental management systems — Requirements with guidance for use or EU Eco-Management and Audit Scheme (EMAS).

The target of the environmental management system 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.

ISO 14001 is the international standard which provides an outline of how to meet the environmental policy and objectives for the business of the applicant.

Eco-Management and Audit Scheme (EMAS) is an environmental management tool which enables organisations to assess, manage and continuously improve their environmental performance.

Verification

A valid ISO 14001 or EMAS certificate issued by accredited certification body

4.4.2 Regional Product

The Applicant can achieve maximum 5 Bonus Points under this section.

4.4.2.1 Regional Product – Non-core Criteria

Requirements

5 Bonus Points for products that are manufactured within 800km radius of HKSAR by road transportation; within a 1,600km radius by rail transportation; or within a 4,000km radius by sea transportation. The distance is measured by the direct distance, not by actual travel distance.

Verification

Documents demonstrating the location of the manufacturer and a map showing the distance between the manufacturer and HKSAR.

4.4.3 Human Toxicity and Ecosystem Impact

The Applicant is required to achieve 15 Basic Points under this section. Additionally, the Applicant can achieve maximum 10 Bonus Points under this section.

4.4.3.1 Hazardous Substances – Non-core Criteria

Requirements

5 Bonus Points for demonstrating the following

Concentration of the hazardous substances in the product shall be below 0.1% by weight of the product. The limited hazardous substances including the following types:

- Carcinogens, teratogens and mutagens including:
    - Any H350, H341, H360, H372, H350i substances in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council[1].
    - The product shall not contain any carcinogenic substances or chemicals that are classified as Group 1, 2A or 2B according to International Agency for Research on Cancer (IARC)[2]. Any such carcinogens which are known to be present as contaminants shall be less than 0.1% by weight of the product.
- Acutely toxic substances including any H330, H310, H300 substances
- Irritants and sensitizing agents including H319, H335, H315 and H334, H317 substances
- Endocrine disruptors and H360F, H360D, H361f, H361d, H362 substances
- Environmental hazards substance including H400, H401, H402, H411, H410, H420 substances
- Insect-resistant agents
- Antimony oxides
- Fungicides and insecticides
- Synthetic pyrethroids

Verification

Documentation including, but not limited to product catalogue, testing report(s), MSDS, and written declaration.

4.4.3.2 Heavy Metals – Core Criteria

Requirements

10 Basic Points for demonstrating the following

[1] Regulation - 1272/2008 - EN - clp regulation - EUR-Lex
[2] Agents Classified by the IARC Monographs, Volumes 1–137 – IARC Monographs on the Identification of Carcinogenic Hazards to Humans

Concentration of toxic heavy metals (or their related compounds) in the product shall be below 0.1% by weight of the product. The limited heavy metals including the following types:

- Arsenic
- Barium
- Cadmium
- Hexavalent chromium
- Lead
- Mercury

Product shall be tested in accordance with relevant BS standard including but not limited to BS 6810-2: 2005 (or later version); other related testing methods are also acceptable with justification provided by the applicant.

Verification

Laboratory test report(s).

4.4.3.3 Plasticisers – Non-core Criteria

Requirements

5 Bonus Points for concentration of phthalate in the product below 0.1% by weight of the product. The limited phthalates including the following types:

- Bis(2-ethylhexyl)phthalate (DEHP)
- Dibutyl phthalate (DBP)
- benzylbutylphthalate (BBP)
- Diisononylphthalate (DINP)
- Diisodecylphthalate (DIDP)
- Di-n-octylphthalate (DNOP)

Verification

Laboratory test report(s). Test report(s) shall be compiled according to the National and International test methods, including but not limited to Standard Operating Procedures for Determination of Phthalates (CPSC-CH-C1001-09.3)

4.4.3.4 Flame Retardants – Core Criteria

Requirements

5 Basic Points for demonstrating that concentration of the flame retardants in the product shall be below 0.1% by weight of the product. The restricted flame retardants including the following types:

- Polybrominated diphenyl ether (PBDEs)

- Polybrominated biphenyls (PBBs)
- Short-chained chlorinated paraffin (SCCP)
- Hexabromocyclododecane (HBCD)

Verification

Laboratory test report(s)

4.4.4 Volatile Organic Compounds (VOC)

The Applicant is required to achieve 10 Basic Points under this section.

4.4.4.1 Formaldehyde - Core Criteria

Requirements

5 Basic points for demonstrating that the concentrations of formaldehyde in air (based on the standard room calculation) from the product shall not exceeded 9 μg/m^3 when the emission rate is tested in a small-scale environmental chamber, as provided by ASTM D5116-10 or equivalent

Verification

Laboratory test report(s)

4.4.4.2 Volatile Organic Compounds & Formaldehyde - Core Criteria

Requirements

10 Basic Points for demonstrating the following

The following maximum limits for concentrations of VOCs in air (based on the standard room calculation) from the product shall not be exceeded when the emission rate is tested in a small-scale environmental chamber, as provided by ASTM D5116-10 or equivalent

Table 3: Maximum allowed concentration of each chemical

Compounds	**CAS**	**μg/m^3**
Acetaldehyde	75-07-0	70
Benzene	71-43-2	30
Caprolactam	105-60-2	70
2-Ethylhexanoic Acid	149-57-5	25
1-Methyl-2-Pyrrolidinone	872-50-4	160
Naphthalene	91-20-3	4.5
Nonanal	124-19-6	13
Octanal	124-13-0	7.2
4-Phenylcyclohexene	4994-16-5	27

Compounds	CAS	µg/m^3
Styrene	100-42-5	220
Toluene	108-88-3	150
Vinyl Acetate	108-5-4	100

Note:

ASTM 5116 provides guidance on determination of emissions of organic compounds from indoor materials and products using small-scale environmental test chambers.

Verification

Laboratory test report(s)

4.5 PERFORMANCE

4.5.1 Product Life

The Applicant is required to achieve 10 Basic Points under this section.

4.5.1.1 Serviceability – Core Criteria

Requirements

10 Basic Points for demonstrating the following

Quality, durability and performance properties of the product shall be demonstrated through at least **FIVE** testing items (as applicable to material type) including, but not limited to, the following, in accordance with relevant testing methods (or later version); other related testing methods are also acceptable with justification provided by the applicant:

Table 4: Testing methods and requirements

Testing items	Testing Methods/ Requirements
• Change in appearance	BS EN 1307:2014, BS EN 15114:2006+A1:2008, BS EN 14215:2013, BS EN 1471:1997, BS ISO 10361:2015, GB/T 38142-2019, GB/T 35611-2017
• Change in colour / Colour fastness	BS EN 1307:2014, BS EN 15114:2006+A1:2008, BS EN 14215:2013, AATCC 16, AATCC 165, GB/T 8427-2019, GB/T 35611-2017
• Static electrical (electrostatic) propensity	BS EN 1307:2014, BS EN 15114:2006+A1:2008, BS EN 1815:1998, BS ISO 6356:2012, AATCC 134, GB/T 12703.1-2008, GB/T 35611-2017
• Castor chair suitability	BS EN 1307:2014, BS EN 15114:2006+A1:2008, BS EN 14215:2013, BS EN 985:2001
• Hairiness (pilling)	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 4802.3-2008, GB/T 35611-2017
• General structural integrity	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 38142-2019, GB/T 35611-2017

Testing items	Testing Methods/ Requirements
• Electrical resistance	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 12703.1-2008, GB/T 35611-2017
• Impact sound insulation	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 19889.7-2005, GB/T 35611-2017
• Thermal resistance	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 10295-2008, GB/T 35611-2017
• Fraying resistance	BS EN 1307:2014, BS EN 15114:2006+A1:2008
• Sound absorption	BS EN 1307:2014, BS EN 15114:2006+A1:2008, GB/T 18696.2-2002, GB/T 35611-2017
• Abrasion resistance	BS EN 1307:2014, GB/T 21196.2-2007, GB/T 35611-2017
• Peel resistance	BS EN 1307:2014, GB/T 26843-2011, GB/T 35611-2017
• Water impermeability	BS EN 1307:2014, GB/T 4744-2013, GB/T 35611-2017

Verification

Laboratory test report(s) for all relevant quality and performance tests.

4.6 INNOSMART

4.6.1 Innovations & Additions – Non-core Criteria

The Applicant can achieve maximum 5 Bonus Points under this section.

Requirements

5 Bonus Points for achieving significant, measurable environmental performance using new practices, technology and strategy not addressed in this Standard.

OR

Demonstrating exemplary performance in any of the existing assessment criteria.

The benefits of environmental performance can be achieved throughout the lifecycle of the products, covering the product, construction process, use and end of life stage.

Verification

Report with a maximum length of 1,000 words, outline the objectives, solution and evaluation of the performance achieved by proposed Smart and Innovative Technologies.

AND

Include attachments that provide evidence of implementation, along with relevant technical specification that support the claims made in the report.

5. SCORING

The points for meeting each criterion stated in this Standard are summarized below.

Table 5: Points to be awarded under the assessment criteria of this Standard

Label	Evaluation Criteria		Points		Related BEAM Plus Credits
			Basic	+Bonus	
	Product Information [CORE]		5	-	
Carbon	CFP quantification		-	+5/+10	MW 10
Resource	Material Optimization	Raw Material [CORE]	10	+5/+10	MW 6
	Circularity	Recyclability	-	+5	
		Packaging Requirement	-	+5	
	Waste Management	Waste Management Plan	-	+5	
	Water Management	Water Consumption Reporting	-	+5/+10	
		Water Recycling Program			
		Water Management System			
	Energy Management	Energy Management Plan	-	+5/+10	
		Energy Management System			
Environment	Environmental Management	Environmental Management System	-	+5	
	Regional Product	Regional Product	-	+5	MW 8
	Human Toxicity and Ecosystem Impact	Hazardous Substances	-	+5	
		Heavy Metals [CORE]	10	-	
		Plasticisers	-	+5	
		Flame Retardants [CORE]	5	-	
	Volatile Organic Compounds (VOC)	Formaldehyde [CORE]	5		
		VOC Content [CORE]	5	-	HWB 8
Performance	Product Life	Serviceability [CORE]	10	-	
InnoSmart	Innovation & Additions		-	+5	MW 4
		Total:	**50**	**+80**	

Related BEAM Plus Credits refer to these relevant credits under BEAM Plus New Buildings Version 2.0, as listed below.

- MW 4: Design for Durability and Resilience
- MW 6: Recycled Materials
- MW 8: Regional Materials
- MW 9: Use of Green Products.
- MW 10: Life Cycle Assessment
- HWB 8: Indoor Air Quality