Criteria for Evaluating Product Certification Schemes

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greenstar Developed by the Green Building Council of Australia

Contents

Change log

Date Issued	Description of changes
19 October 2009	Section 2.2, Deemed-to-Satisfy Criteria – International Frameworks Applicable to Schemes (page7) Revisions to international standards and codes of practice applicable to certification scheme governance and standard development procedures
19 October 2009	Section 3.1, Part I Section A – Governance and Transparency Criteria 1 - Independent Assessment (page 7) Revision to assessor competency requirements.
19 October 2009	Section 4 Part II – Priority Areas of Concern PAC-1'GHG' and PAC-4 'Water' (pages 11 and 14) Clarification relating to standards and methodologies for greenhouse gas and water footprint calculations, including clarification of boundary conditions and units of reporting.
19 October 2009	Section 4 Part II – Priority Areas of Concern PAC-3 'Material Extraction' (page 14) Inclusion of the words 'or raw material' in relation to data collection in order to distinguish this criteria from End of Life related matters.
24 March 2010	Section 3.1, Part I Section A – Independent Auditing Clarification of ISO Guide 65 requirements related to independent auditing
12 July 2010	Appendix A, correction of emission limit and unit of measurement for JIS 1901
05 August 2010	Section 4 Part II – Priority Areas of Concern PAC-2 ‘Toxicity’ (page 15) Correct ‘IARC and WHO’ reference, replace with ‘IARC of the WHO’
12 May 2011	Rebranding Exercise for Green Star®

20 November 2013	The Assessment Framework for Product Certification Schemes was expanded to accommodate standards for paints, adhesives, sealants and cleaning products. This expansion builds on the existing framework by incorporating further assessment pathways, Assessment Tool for Product Certification Schemes and Assessment Tool Users Guide. Removed 'Part I' from document title.
15 September 2014	Adjustment to VOC limit relevant to adhesives and sealants following changes to Green Star - Interiors and based on stakeholder engagement.

1.0 Foreword

The Assessment Framework for Product Certification Schemes (Framework) encompasses the Assessment Process, Assessment Criteria and Assessment Tool that have all been developed through the Product Certification Project (PCP 2008-9) to enable product certification schemes (schemes) to be assessed by the Green Building Council of Australia (GBCA) for recognition within Green Star rating tools.

This document provides the Assessment Criteria, including compliance requirements and guidance, which are applied to the assessment of schemes and their standards. Criteria are divided into two parts:

- Part I – Scheme Criteria assesses the governance, transparency and standards development procedures of schemes.
- Part II – Flooring, Furniture and Assemblies Standard Criteria
- Part III – Paints, Adhesives, Sealants and Carpets Volatile Organic Compounds criteria
- Part IV – Cleaning Products Standard Criteria

It is intended to be used in conjunction with the following supporting documents which can be accessed on the Product Certification page of the GBCA website:

Product Certification Project – Background and Outcomes;

- Assessment Process for Product Certification Schemes;
- Assessment Tool for Product Certification Schemes; and
- Assessment Tool Users Guide

Feedback:
The Framework has been released following a period of consultation with schemes and industry experts. The GBCA welcomes feedback on an ongoing basis to ensure the Framework continues to evolve and reflect best practice in product certification to environmental and social performance standards.

2.0 Scope of assessment criteria for schemes

The Assessment Criteria presented in Part I, II and IV of this document apply only to voluntary third-party certification schemes that:

- conduct product-focused environmental and social assessment of fitout products that are directly applicable to the Green Star Material Calculators;
- In the case of Flooring, Furniture, Assemblies and Cleaning Products, base product assessments on multi-criteria, performance-based standards that require a product life cycle approach;
- award a licence that authorises the use of a label on products; and

- award a licence and label that is representative of overall environmental preference of a product within a particular product category.

2.1 Validity of assessment criteria

The criteria of the Framework shall be reviewed from time to time following the initial release of the Framework, to incorporate feedback and industry changes. The GBCA reserves the right to incorporate technical and/or editorial amendments to this document at any time.

2.2 Acknowledgements

The GBCA would like to thank the many individuals and organisations that contributed to the development of the Assessment Criteria including users of Green Star rating tools, Green Star certified assessors, and manufacturers and suppliers of fitout products. Thanks are also extended to the representatives of various Australian and international product certification schemes for their patience and generous input of information and time throughout the duration of the PCP. In particular, the GBCA would like to extend significant gratitude to the members of the PCP Expert Reference Panel, and the Royal Melbourne Institute of Technology Centre for Design. Without the input of these dedicated groups the development of the criteria presented in this document would not have been possible.

3.0 Assessment Criteria Overview

Part I - Scheme Criteria:

Section A – Governance and Transparency

1. Independent Assessment
2. Environmental Claims
3. Transparent Methodology
4. Conflict Resolution

Section B – Standard Development[1]

5. Life Cycle Assessment-based
6. Decision Making
7. Public Comment
8. Stated Objectives
9. Criteria
10. Procedures
11. Stakeholder Representation
12. Representative of Best Practice

[1] Criteria are adapted from ISEAL (International Social and Environmental Accreditation and Labelling Alliance) Code of Good Practice for Setting Social and Environmental Standards which is compatible with ISO 17065 – ISO 17065 'Conformity assessment - Requirements for bodies certifying products, processes and services'

13. Publicly Available
14. Harmonisation

Part II - Flooring, Furniture and Assemblies Standard Criteria - Priority Areas of Concern (PAC):

PAC-1 Greenhouse Gases
PAC-2 Toxicity

PAC-3 Material Extraction
PAC-4 Water
PAC-5 Social and Environmental Compliance
PAC-6 Durability
PAC-7 End of Life
PAC-8 Product Emissions

Part III

Paint Adhesives, Sealants and Carpet Volatile Organic Compounds criteria

Part-IV - Cleaning Products Standard Criteria – Priority Areas of Concern (PAC):

PAC-1 Durability
PAC-2 Toxicity
PAC-3 End-of-life
PAC-4 Product Emissions
PAC-5 Social and Environmental Compliance

3.1 Criteria Weightings

There are no points or weightings allocated to the criteria in Part I, compliance with all Part I criteria are prerequisites for GBCA recognition of a scheme.

There is a total of 100 points allocated to the criteria in Part II. The weightings for all criteria in Part II are variable. The scheme is required to nominate the weightings for all Priority Areas of Concern (PAC) in the Assessment Tool at its discretion based on the strengths, weaknesses and relevance of its standard(s). However this does not apply to PAC-7 ‘Product Emission’ and PAC-8 ‘End of Life’, as these have fixed weightings. Refer to Part IV – Assessment Tool User Guide for more information.

The GBCA’s rationale for creating flexibility between criteria weightings is to acknowledge the variability in approaches used by schemes to assess the environmental preference of products as well as the variability in product/material types and environmental performance standards. If the weightings for all PACs were fixed by the GBCA then the Framework would be prescriptive and unable to recognise the differences between standards that may be put forward for assessment through the Framework.

Part-III of the framework includes only Volatile Organic Compounds (VOC) requirements applicable to paints, adhesives, sealants based on VOC requirements for these items found in Green Star rating tools. No weightings are applicable.

Part-IV includes five PACs, all must be meet for a Cleaning Products standard recognition, no weightings are applicable

3.2 Part 1 Deemed-to-satisfy-criteria - international frameworks applicable to schemes

A Scheme may choose to demonstrate compliance with Part I criteria on the basis of existing or newly commissioned reports and audits of the schemes governance and/or standard development processes, where:

- The scheme has been independently audited against the requirements of international frameworks and/or codes of practice and/or standards for organisations conducting standard development and/or product accreditation; and
- The scheme can provide documentation demonstrating a favourable result of such audit to the GBCA.

There are many examples of international standard for certification that includes requirements which are identical to some of the Framework's Part I criteria. Other applicable standards or codes of practice may satisfy all or some of the criteria in Part I.

Audit reports for deemed-to-satisfy compliance with international frameworks will only be accepted from accredited auditors registered by RABQSA (in Australia) or other national or international auditor accreditation systems (for example IRAC or IPCA or JAB).

Peer reviews (or other 2nd party review or audits) of schemes may be used as one avenue to support claims of compliance, however the GBCA will only accept a third party audit report as deemed to satisfy Part I criteria.

In the event independent audit reports are used as a reference for compliance the scheme shall indicate which Part I criteria are satisfied by the audit provided, this shall be indicated in the appropriate section of the Assessment Tool. The Independent Assessment Panel (IAP) will use the applicant scheme's audit report results to determine whether those components of the Part I Assessment Criteria are satisfied.

There are many examples of standards and codes of practice applicable to a product certification schemes governance arrangements and standard development procedures, the following is a short list of some applicable standards.

- The ISEAL 'Code of Good Practice for Setting Social and Environmental Standards';
- ISO standards such as:
    - ISO 14020:1998 'Environmental labels and declarations - General principles'
    - ISO 14024:1999 ' Environmental labels and declarations - Type I environmental labelling - Principles and procedures'
    - ISO Guide 59: 1994 'Code of Good Practice for Standardization'
    - ISO 17065 'Conformity assessment - Requirements for bodies certifying products, processes and services'
- ACCC recognition as Certification Mark

4.0 Part 1 - Scheme Criteria

Part I is divided into two sections. Section A addresses the scheme's governance and transparency while Section B addresses its standards development procedures. Schemes applying for recognition of multiple standards need to provide documentation for Part I only once.

Compliance with the criteria in Part I is awarded on a yes = pass or no = fail basis.

4.1 Part I Section A – Governance and Transparency

1. Independent Assessment

Compliance Requirements:

- Products or materials shall be assessed by a party independent of the scheme.
- The scheme shall ensure certification decisions are free of conflicts of interest from parties with vested interests.
- Assessments shall be performed by accredited auditors registered by RABQSA (in Australia) or other national or international auditor accreditation systems.

Additional Guidance:

In accordance with ISO 17065 (previously known as ISO Guide 65), which is the basis for awarding deemed-to-satisfy compliance with Part-I of the Framework, a Certification Body (CB) may have the evaluator activity under their control (e.g. via employment or service contract with the evaluator) as long as the evaluation and the final decision to award the certification are independent from one another. However, the certification decision must remain with the CB and not the evaluator .

Examples of Auditor Accreditation Systems include:

- RABQSA, http://www.rabqsa.com/
- IRCA, www.irca.org
- IPCA, http://www.ipcaweb.org/
- JAB, http://www.jab.or.jp/english/index.html

2. Environmental Claims

Compliance Requirements:

Claims made by the scheme on behalf of a certified product or its manufacturer or supplier shall be compliant with ISO 14021 'Environmental Labels and Declarations – Self-Declared Environmental Claims' (Type II Environmental Labelling) requirements, OR the Global Reporting Initiative's 'Sustainability Reporting Guidelines'.

Additional Guidance:

The ISO 14000 series is a series of international standards and guides concerning environmental management. Among other matters, the ISO 14000 series provides guidelines for making balanced environmental claims; Guideline ISO 14021 'Environmental Labels and Declarations - Self-Declared Environmental Claims' is adapted by Australian Standards in relation to ensuring accuracy in environmental claims.

3. Transport Methodology

Compliance Requirements:

Schemes shall provide a publicly available and transparent methodology for the assessment of products or materials with a clear pass/fail, or tiered structure (e.g. Level 1, Level 2, Level 3) for the award of certification.

4. Conflict Resolution

Compliance Requirements:

The applicant scheme shall have a conflict resolution process in place with procedures to manage disputes regarding compliance between an applicant and the auditing body. Procedures shall be publicly available and ensure that the conflict resolution process:

- is independent and free from conflicts of interest;
- is completed in a timely manner;
- provides an opportunity for appeal by the aggrieved party; and
- includes a provision to make public the outcome of the grievance resolution process.

Additional Guidance:

Refer to Section 2.2 for information on deemed-to-satisfy options available for this criterion.

4.2 Part I Section B – Standard Development

The following criteria refer to standard development process undertaken by the scheme or the standard development body responsible for creating the standard administered by the scheme.

Additional guidance for the compliance requirements of the criteria in Section B may be found in the ISEAL (International Social and Environmental Accreditation and Labelling Alliance) 'Code of Good Practice for Setting Social and Environmental Standards' and other international frameworks applicable to schemes as described in Section 2.2 of this document.

5. Life Cycle Approach

Compliance Requirements:

- The scheme shall use science-based data to set pass or fail limits and benchmarks.
- All targets, limits or benchmarks in the standard shall be clearly identified.

6. Stakeholder Representation

Compliance Requirements:

The scheme shall demonstrate that it has invited all relevant stakeholders to be involved in the development of the standard and that all reasonable efforts have been made to address concerns of stakeholders as per the guidelines of:

- the ISEAL 'Code of Good Practice for Setting Social and Environmental Standards'; OR

- the guidelines for balanced representation from the Australian Accreditation Board for Standards Development Organisations (ABSDO 2007); OR
- other international frameworks applicable to certification schemes as described in Section 2.2 of this document.

7. Decision Making

Compliance Requirements:

The scheme shall ensure that:

- the standard development process includes strategies for seeking consensus among stakeholders expressing interest in the topic of the standard under development;
- documented procedures exist to guide decision making in the absence of consensus; and
- procedures for decision making are publicly available and easily accessible to any interested stakeholders.

8. Public Comment

Compliance Requirements:

The scheme shall provide at least one round of public review/comment period by interested parties for the development and revision of standards.

- Comment period shall be for a minimum of 30 days.
- The scheme shall take into account comments received from the comment period.
- Written synopsis of comments shall be compiled and made publicly available.

9. Stated Objectives

Compliance Requirements:

- The scheme shall clearly and explicitly specify the social, environmental and/or economic objectives of a standard.

10. Criteria

Compliance Requirements:

- Standards shall be expressed in terms of a combination of process, management and performance criteria rather than design or descriptive characteristics.
- Standards shall not favour a particular technology or patent(s).
- The detail of compliance requirements to all criteria must be publicly available and must clearly outline the exact requirements for achieving compliance with each criterion.

- Compliance requirement details shall be included within the standard document itself for each criterion.

11. Representative of Best Practice

Compliance Requirements:

- The scheme shall establish standards that encourage improvements above and beyond regulatory standards.
- The scheme shall ensure that the standard development process includes a review of existing international and national regulations and standards that are relevant to the standard under development.
- The findings of this review shall be used to inform environmental and social performance-based benchmarks in the standard.

12. Publically Available

Compliance Requirements:

The scheme shall ensure that:

- all approved standards are published and publicly available;
- standard-setting procedures and summaries of work programmes are publicly available;
- a contact point for standard-related enquiries is available; and
- standards are reviewed and updated according to a publicly communicated schedule of regular review.

13. Procedures

Compliance Requirements:

The scheme shall ensure that:

- documented procedures are available to all interested parties on the standard development and certification process; and
- procedures include a complaints resolution mechanism for interested parties that may object to the standard development process or outcomes of the developed or revised standard.

14. Harmonisation

Compliance Requirements:

- The scheme shall pursue harmonisation between standards by synchronising the requirements of other similar standards operated by the same scheme, or similar national and international standards.
- The scheme shall document any differences between its standard(s) and other similar national or international standards and provide justification for these differences.

Additional Guidance:

Documentation and justification of differences between similar standards shall be provided in the format of a comparison table. The IAP reserves the right to seek additional information from the scheme, or to reject the rationale put forward by the scheme for its justification of differences, if such justification is deemed to be insufficient by the IAP.

5.0 Part II - Flooring, furniture and assemblies priority areas of concern

Part II addresses the content of standards relevant to flooring, assemblies and furniture, these items correspond with the Flooring, Assemblies and Furniture Calculators in Green Star rating tools. Eight key issues affecting the life cycle of fitout products and materials are the focus of Part-II. These issues are identified by the GBCA as Priority Areas of Concern (PACs). The PACs are defined according to sets of best practice environmental, social and human health impact criteria. These criteria have been selected following a detailed review of current standard-setting methods, international best practice environmental and human health impact assessment criteria, as well as information from national and international eco-labelling programs. The criteria have also been refined through engagement with the Expert Reference Panel. Each PAC contains compliance requirements and additional guidance sections to assist schemes in the development of standards as well as the preparation of submissions .

A scheme applying for recognition of multiple standards must lodge a separate Part II submission for each standard. Tiered standards (e.g. silver, gold, platinum) will be considered as one standard for the purpose of assessment fees (refer to section 4.0 in Assessment Process for Product Certification Schemes). However, separate Part II submissions must be provided to document the differences in criteria between each tier awarded within the standard.

Only standards which are performance-based (e.g. made up of performance-based criteria) will be considered for assessment by the GBCA. Performance-based criteria are defined as criteria that can definitively validate claims that a sufficient level of environmental (and/or other) performance has been achieved.

A scheme must not allow applicants (e.g. the manufacturer) to customise the standard against which it will be certified. The criteria must not be optional, flexible or allowed to be achieved post-licensing.

5.1 Part II – Standard criteria for flooring, furniture and assemblies

Part II Mandatory Requirement:
The standard must apply to an entire product category (e.g. carpet) rather than a product sub-category (e.g. nylon, modular, or wool carpet)

PAC Mandatory Requirements:
Most PACs are comprised of multiple criteria which are sometimes referred to as criterion and/or components. One criterion in the ‘Toxicity’ PAC, and one criterion in the ‘Social and Environmental Requirements’ PAC require mandatory compliance in order for a standard to be considered for recognition by the GBCA. For example, this does not mean that the entire ‘Toxicity’ PAC is mandatory, as it is comprised of multiple criteria components.

PAC-1 Greenhouse Gases (GHG)

Greenhouse Gas Accounting – The standard shall require public reporting of the comprehensive product life cycle greenhouse gas footprint. Reporting to be based on a 'per functional unit' basis.

Guidance: Greenhouse gas footprints shall be generated in accordance with ISO 14067:2013 (Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification and communication) or PAS 2050:2008 (Specification for the assessment of the life cycle greenhouse gas emissions of goods and services).

Internationally applicable LCA techniques are specified in ISO 14040:2006 (Environmental management - Life cycle assessment - Principles and framework) and ISO 14044:2006 (Environmental management - Life cycle assessment - Requirements and guidelines) and ISO 14067 (Carbon footprint of products – Requirements and guidelines for quantification and communication).

Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules' (PCRs) for select product, or the creation of new PCR's. PCR's set the LCA-rules for data collection, methodology, calculations and presentation of the results. Refer to GEDNet Guidebook for more information (http://www.gednet.org/?page_id=8), in particular section 8.2.3.

The GBCA recognises that new international standards are currently being developed for (GHG) footprint calculations. Schemes may therefore lodge a request to the IAP for recognition of an alternative GHG footprint standard as they become available. The IAP will rely on expert advice in its decision to accept or reject requests to recognise other GHG footprint standards.

PAC-2 Toxicity

Carcinogens – *Part II Mandatory Requirement* – The standard shall restrict user exposure to substances recognised as carcinogenic to less then the NOAEL (No Observable Adverse Effect Level) or zero if the NOAEL is unknown.

Acutely Toxic Substances – The standard shall address all acutely toxic substances that are relevant to the products covered by the scope of the standard, in accordance with Additional Guidance below. The Acutely Toxic Substances criterion of the Toxicity PAC is comprised of two parts:

Exposure to Toxic Substances – The standard shall require limitation of end user exposure (worth 50% of points available for this criterion); AND/OR

Content of Toxic Substances – The standard shall require manufacturer to meet a well documented and justifiable industry specific benchmark for material toxicity (worth 50% of points available for this criterion).

Heavy Metals – The standard shall restrict or set justifiable limits on the use of heavy metals. As a minimum: arsenic, cadmium, chromium, copper, lead, tin, mercury and antimony. The scheme must submit justification for limits implemented or allowances made.

Hazardous Chemicals – The standard shall restrict the use of the following hazardous chemicals as they apply to the standard's relevant product group: endocrine disrupters, mutagens and teratogens, irritants and sensitising agents, persistent organic pollutants (POPs) and bio-accumulative chemicals. The scheme must justify which of these hazardous chemical classifications are applicable to the product group relevant to the standard under assessment.

Guidance:

Carcinogens – The standard shall refer to the following lists and classifications of carcinogens:

- The International Agency for Research on Cancer (IARC) of the World Health Organisation (WHO) class 1 and 2a;
- EU Consolidated list of C/M/R Substances Category 1 and Category 2; and
- Appropriate R phases: (e.g. R45- R49) and/or H Statement (H350, H350i, H340, H373).

Exemption for formaldehyde – In the case of engineered wood products (e.g. composite wood products) the emissions of free formaldehyde from such products must be in conformance to limits listed in Appendix A.

Acutely toxic substances – The standard shall:

- expressly prohibit the use of agents listed in Annex III of the Rotterdam Convention;
- either prohibit or provide appropriate restrictions on relevant agents listed in the OSHA List of Highly Hazardous Chemicals, Toxics and Reactives; and
- Either prohibit or provide appropriate restrictions on the release of agents carrying the following Risk Phrases or H Statements:
    - R Phases R26, R27 and R28. Or H Statements. H300, H310 and H330; and
    - R-phases 50 – 59 inclusive Or H Statements H400, H402, H410, H411, H412, H413.

Industry-specific benchmarks – The applicant scheme is required to demonstrate that the relevant aspect of their standard(s) either exceeds industry-accepted benchmarks for the relevant product category, or establishes aspirational or best practice industry-specific benchmarks. If no industry-agreed benchmark exists then the scheme is expected to create a justifiable aspirational benchmark deemed achievable by the industry affected.

Justification of limits – For this criterion the emphasis is on the applicant to provide justification as to why an otherwise prohibited chemical should be allowed, and at what level, by the certification standard. Otherwise, complete prohibition is considered appropriate.

Justifications shall be based on peer-reviewed international best practice science. This and other such justification must generate IAP confidence that sufficient rationale exists for limits applied.

PAC-3 Material Extraction

Resource Efficiency – The standard shall require manufacturers to gather data on material usage and waste generation of raw materials in a format that allows optimisation of the production process, along with a commitment to optimise the production process in accordance with the following.

Manufacturers shall optimise materials sourcing and production processes in accordance with resource and materials efficiency measures that reduce negative environmental impacts. Such measures shall address impacts from materials sourcing, use and disposal, as they apply to the product group that is applicable to the standard, and may include but are not limited to:

- use of recycled materials or components;
- sourcing of materials from rapidly-renewable resources;
- reduction of waste generated in the manufacturing process or incorporation of waste back into the production process;

- dematerialisation; and
- minimisation of harmful sourcing, farming or habitat destroying practices and use of practices that have a minimal or neutral impact on land use, biodiversity and soil erosion.

PAC-4 Water

Water Use Accounting – The standard shall require public reporting of the comprehensive product life cycle water footprint. Reporting shall be based on a 'per functional unit' basis.

Guidance:

Water footprints are to be generated in accordance with LCA methodologies ISO 14040:2006 (Environmental management - Life cycle assessment - Principles and framework) and ISO 14044:2006 (Environmental management - Life cycle assessment - Requirements and guidelines).

Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules' (PCRs) for select product, or the creation of new PCR's. PCR's set the LCA-rules for data collection, methodology, calculations and presentation of the results. Refer to GEDNet Guidebook for more information (http://www.gednet.org/?page_id=8), in particular section 8.2.3.

The GBCA recognises that specific water footprint standards are yet to reach international acceptance. Protocols and standards are in the process of development specific to water footprint accounting.

PAC-5 Social and Environmental Compliance

Legal Compliance – Part II Mandatory Requirement – The standard shall require manufacturers to comply with relevant social and environmental legislation or other legal requirements of the countries in which they operate.

Compliant Supply Chain – The standard shall require manufacturers to seek whole-of-enterprise social compliance of suppliers via external independent assurance of compliance with International Labour Organisation (ILO) conventions, Worldwide Responsible Accredited Production (WRAP) certification, Business Social Compliance Imitative (BSCI) certification or other equivalent certification.

Public Reporting – The standard shall require manufacturers to conduct external independent public reporting in accordance with the Global Reporting Initiative (GRI)2 on the following topics as a minimum: environment, human rights and labour.

Environmental Claims – The standard shall require public claims made by manufacturers regarding the product's environmental performance to be verified by the scheme as compliant with ISO 14021 'Environmental Labels and Declarations - Self-Declared Environmental Claims' (Type II Environmental Labelling) requirements, OR the Global Reporting Initiative's 'Sustainability Reporting Guidelines'.
OR
Compliance to Social/Ethical Guidelines – The standard shall require whole-of-enterprise compliance with SA 8000.3

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[2] *Global Reporting Initiative (GRI) – refer to http://www.globalreporting.org/Home*

[3] *SA 8000 – refer to: http://www.sa-intl.org/index.cfm?&stopRedirect=1*

Guidance:

There are two options available for documenting compliance with the three criteria in this PAC

(i.e. Legal Compliance, Compliant Supply Chain, Public Reporting and Environmental Claims).
First, the scheme can demonstrate that the standard requires compliance with the criteria (or part thereof). Alternatively the scheme can require compliance to SA 8000.

ILO Conventions – Refers (at a minimum) to:

- Freedom of Association and Collective Bargaining (Conventions 87 and 98);
- Elimination of Forced and Compulsory Labour (Conventions 29 and 105);
- Elimination of Discrimination in respect of employment and occupation (Conventions 100 and 111);
- Convention 155 - Occupational Safety and Health and its accompanying Recommendation No. 164; and
- Convention 161 - Occupational Health Services and its accompanying Recommendation No.171.

Whole of Enterprise – Refers to all entities involved in the supply chain representing the entire product and its material components.

PAC-6 Durability

Fitness for Purpose – The standard shall require products to comply with relevant national fitness for purpose standards.

Guidance:

National fitness for purpose standards – In Australia examples include, but may not be limited to, Australian Standards (denoted AS-NZS), the Australasian Furnishings Research & Development Institute (AFRDI) Blue Tick Product Certification (furniture), and the Carpet Institute of Australia Limited Australian Carpet Classification Scheme (ACCS).

PAC-7 End of Life

Product Stewardship Program – The standards shall require manufacturers and/or suppliers of certified products or materials to have a product stewardship program in place. This program shall be publicly available and entail providing contractual arrangements with their customers to take products back at the end of the product's in-use phase for some form of refurbishment, reuse or recycling as determined appropriate by the standard.

Verification of Product Stewardship Program Arrangements – The standards shall require verification that the necessary arrangements are in place to deliver the claims of the product stewardship program. This may include, but is not limited to, demonstration that contractual agreements exist between the manufacturer and / or supplier, wholesaler or retailer with third party recyclers, transport companies, charities, second-hand retailers and refurbishment companies.

Design for Disassembly – The standards shall include guidance on design for disassembly that requires manufacturers to design products in ways that enable their easy separation into base constituent materials to improve end of life reuse or recycling.

Guidance:

Product Stewardship – Is a product-centred approach to environmental protection that requires the associated parties involved in the product's life cycle (e.g. manufacturers, retailers, users) to share responsibility for reducing the product's environmental impact.

Design for Disassembly – Applies to product streams containing distinct components (e.g. furniture, partitions, storage) and implies products are designed so that components are easily disassembled. The processes which are required in product removal from site and component separation must not involve specialist tools, so that a future recycler, manufacturer or other third party might easily direct the different materials into the appropriate reuse or recycling streams. Flooring product standards may allow for the use of specialist tools to facilitate product component disassembly.

PAC-8 Product Emissions

Low VOC Emissions – The standard shall require certified products with applications in interior fitouts (e.g. furniture, floor coverings) to comply with the Total Volatile Organic Compound (TVOC) emission limit benchmarks stated in Appendix B.

Guidance:

In the event that VOC test protocols not listed in Appendix B are referenced by the scheme, the scheme shall provide evidence of the compatibility of such test protocols to the protocols and benchmarks listed in Appendix B. Justification shall be supported by a recognised indoor environmental quality expert.

6.0 Part III - Paints, Adhesives and Sealants

Part III addresses the Volatile Organic Compounds requirements of adhesives, sealants, paints and carpet standards according to criteria contained in Green Star rating tools. The VOC related criteria of Green Star rating tools have been developed in consultation with stakeholder.

Paints, Adhesives and Sealants

This criterion is relevant to internal applications for all types of paints, adhesives or sealants applied on-site, including both exposed and concealed applications. Total VOC (TVOC) values should reflect the final product ready to use, inclusive of tints (in the case of paints), water and irrespective of the amount used or the number of coatings. TVOC content results must be made in grams of VOC per litre (g/L) of ready to use product.

TVOC limits relevant to paints adhesives or sealants are detailed in the following table.

Product Category	Max TVOC content in grams per litre (g/ L) of ready to use product.
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
General purpose adhesives and sealants	70
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesive	100

A VOC data sheet is required to establish compliance of paints, adhesives and sealants to the limits detailed in the above table. Three options exist, as follows:

1. Laboratory testing:

The following experimental test methods are relevant to paints:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890‑2 (2006), for a material with a presumed VOC <15%;
- ISO Method 11890‑1 (2007), for a material with a presumed VOC content >15%;
- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475) and water content (D4017). Exempt compounds (D4457) must not be subtracted in the calculation of VOC content.

The testing method applicable to adhesive and sealants is only ASTM D3960 as detailed above for paints. For more information on ASTM D3960 refer to South Coast Air Quality Management District Rule 1168.

The emission levels must be established by a National Association of Testing Authorities (NATA) or another ISO/IEC17025 accreditation laboratory.

2. Product Material Safety Data Sheets (MSDS):

- The MSDS must state the following:
- The TVOC numerical result in g/litre of ready product (highlighted);
- The test method used to obtain the results; and
- For tinted products, also confirming the TVOC value is inclusive of tints required to achieve the manufacturer's colour range.

3. Measurement by content

Theoretical TVOC statement prepared by the manufacturer in an appropriately signed letter containing the following:

- Numerical TVOC results expressed in g/litre of product; and
- Statement that the results have been obtained based on the subtotal of the known TVOC values of the product's raw ingredients.

CARPETS

All carpets comply with the Total VOC (TVOC) limits within the following table. The emission levels detailed in this table must be established by a NATA or another ISO/IEC17025 accreditation laboratory

Carpets using ASTM D5116 test protocol	
	Limit
Total VOC limit	0.5mg/sqm per hour
4-PC (4-Phenylcyclohexene)	0.05mg/sqm per hour
Carpet using ISO 16000 test protocol (also known as EN 13419)	
TVOC at three days-	0.5 mg/sqm per hour
Carpet using ISO 10580 (also known as ISO/TC 219) – Document N238	
TVOC at 24 hours	0.5mg/sqm per hour

7.0 Part IV - Cleaning products priority areas of concern

Part IV addresses the content of standards relevant to cleaning products, and corresponds with the Green Star – Performance Green Cleaning Credit, this credit requires, amongst other requirements, the use of cleaning products certified by GBCA recognised product certification standards. Six key issues are the focus of Part-IV. These issues are identified by the GBCA as Priority Areas of Concern (PACs). The PACs are defined according to sets of best practice environmental, social and human health impact criteria. These criteria have been selected following a detailed review of current standard-setting methods, international best practice environmental and human health impact assessment criteria, as well as information from national and international eco-labelling programs.

A scheme must not allow applicants (e.g. the manufacturer) to customise the standard against which it will be certified. The criteria must not be optional, flexible or allowed to be achieved post-licensing.

PART IV-Mandatory Requirement

The standard must apply to an entire product category (e.g. general purpose cleaners) rather than a product sub-category (e.g. carpet cleaners).

PAC-1 Fitness for Purpose

The standard shall require products to comply with relevant fitness for purpose standards or establish fitness for purpose through independent testing, market acceptance or other means.

PAC-2 Health and End-of-life

Biodegradability – The standards shall require surfactants and other organic materials used in products are anaerobically biodegradable in accordance with a recognised standard.

Carcinogens – The standard shall restrict user exposure to substances recognised as carcinogenic to less then the NOAEL (No Observable Adverse Effect Level) or zero if the NOAEL is unknown.

Acutely Toxic Substances – The standard shall address all acutely toxic substances that are relevant to the products covered by the scope of the standard, in accordance with Additional Guidance below. The Acutely Toxic Substances criterion of the Toxicity PAC is comprised of two parts:

- **Exposure to Toxic Substances** – The standard shall require limitation of end user exposure; and
- **Content of Toxic Substances** – The standard shall require manufacturer to meet a well documented and justifiable industry specific benchmark for toxicity.

Heavy Metals – The standard shall restrict or set justifiable limits on the use of heavy metals. As a minimum: arsenic, cadmium, chromium, copper, lead, tin, mercury and antimony. The scheme must submit justification for limits implemented or allowances made.

Hazardous Chemicals – The standard shall restrict the use of the following hazardous chemicals: endocrine disrupters, mutagens and teratogens, irritants and sensitising agents, persistent organic pollutants (POPs) and bio-accumulative chemicals. The scheme

must justify which of these hazardous chemical classifications are applicable to the product group relevant to the standard under assessment.

Guidance:

Biodegrability – Organic material can be degraded aerobically with oxygen, or anaerobically, without oxygen.

- Examples of relevant standards for anaerobically biodegradability include:
- AS 4351 – Biodegradability – Organic compounds in an aqueous medium.
- ASTM D2667 - 95(2008) Standard Test Method for Biodegradability of Alkylbenzene Sulfonates;
- ASTM E1625 - 94(2008) Standard Test Method for Determining Biodegradability of Organic Chemicals in Semi-Continuous Activated Sludge;
- EN 7827-2010 - Water quality - Evaluation in an aqueous medium of the ultimate aerobic biodegradability of organic compounds - Method by analysis of dissolved organic carbon (DOC);
- ISO 11734 Water quality - Evaluation of the ultimate anaerobic biodegradability of organic compounds in digested sludge - Method by measurement of the biogas production;
- OECD 301 Biodegradation Testing for Industrial - Consumer Products;
- OECD 301E - Modified Solution Biodegradation by Dissolved Organic Carbon Determination; or
- Other standard may also be accepted if they are shown to provide equivalent test results as standard listed above

Carcinogens – The standard shall refer to the following lists and classifications of carcinogens:

- The International Agency for Research on Cancer (IARC) of the World Health Organisation (WHO) class 1 and 2a;
- EU Consolidated list of C/M/R Substances Category 1 and Category 2; and
- Appropriate R phases: (e.g. R45- R49) and/or H Statement (H350, H350i, H340, H373).

Acutely toxic substances – The standard shall:

- expressly prohibit the use of agents listed in Annex III of the Rotterdam Convention;
- either prohibit or provide appropriate restrictions on relevant agents listed in the OSHA List of Highly Hazardous Chemicals, Toxics and Reactives; and
- Either prohibit or provide appropriate restrictions on the release of substances carrying the following Risk Phrases or H Statements:
    - R Phases R26, R27 and R28. Or H Statements. H300, H310 and H330;
    - R-phases 50 – 59 inclusive Or H Statements H400, H402, H410, H411, H412, H413; and

- Toxicity of degradation products should also be addressed.

Industry-specific benchmarks – The applicant scheme is required to demonstrate that the relevant aspect of their standard(s) either exceeds industry-accepted benchmarks for the relevant product category, or establishes aspirational or best practice industry-specific benchmarks. If no industry-agreed benchmark exists then the scheme is expected to create a justifiable aspirational benchmark deemed achievable.

Justification of limits – For this criterion the emphasis is on the applicant to provide justification as to why an otherwise prohibited chemical should be allowed, and at what level, by the certification standard. Otherwise, complete prohibition is considered appropriate.

Justifications shall be based on peer-reviewed international best practice science. This and other such justification must generate assessors confidence that sufficient rationale exists for limits applied.

PAC-3 Material Extraction

The standard shall require manufacturers to gather data on material usage and waste generation of raw materials in a format that allows optimisation of the production process, along with a commitment to optimise the production process in accordance with the criteria set out below.

Manufacturers shall optimise materials sourcing and production processes in accordance with resource and materials efficiency measures that reduce negative environmental impacts. Such measures shall address impacts from materials sourcing, use and disposal, as they apply to the product group, and may include but are not limited to:

- Use of recycled materials;
- Sourcing of materials from rapidly-renewable resources;
- Minimisation of harmful sourcing, farming or habitat destroying practices and use of practices that have a minimal or neutral impact on health, land-use, biodiversity and soil erosion. For example requirements pertaining to palm oil, palm kernel, fragrances, dyes and colorants.
- Product form that minimise packaging & transportation, for example concentrate and sachet.
- Reduction of waste generated in the manufacturing process or incorporation of waste back into the production process.

PAC-4 VOC Emissions

The standard shall require Volatile Organic Compounds (VOC) limits based on the California Air Resources Board (CARB).

Guidance:

California Air Resources Board - see www.arb.ca.gov

PAC-5 Social and Environmental Compliance

The standard shall require manufacturers to comply with relevant social and environmental legislation or other legal requirements of the countries in which they operate.

8.0 References and further information

Accreditation Board for Standards Development Organisations (ABSDO), Criteria for Designation as an Australian Standard 2007, http://www.absdo.org.au/pdf/Criteria%20for%20Designation%20as%20an%20Australian%20Standard%20September%202007.pdf accessed 22.6.2009

ACA 2008 American Chemistry Council, http://www.phthalates.org/yourhealth/cancer.asp accessed 24.6.2008

Agency for Toxic Substances and Disease Registry, (ATSDR) 2008, http://www.atsdr.cdc.gov/csem/arsenic/physiologic_effects.html accessed 26.6.2008.

ANZ 2008, 'Global Reporting Initiative', found at: http://www.anz.com/aus/CorporateResponsibility2006/GRI/default.asp, accessed August 2008.

Australian Government, Department of Health and Aging, NICNAS Guidance Note, The Rotterdam Convention', found at: http://www.nicnas.gov.au/treaties/rotterdam_convention/rotterdam_conventaion_guidance_note_pdf.pdf, accessed 18.07.2008.

BHP 2008, 'Licence to Operate, BHP Billiton Sustainability Report 2006', found at: http://sustainability.bhpbilliton.com/2006/sustainability/about/griNavigator/, accessed August 2008.

Der Blaue Engel, (Blue Angel) 2008, Federal Environmental Agency, Germany, http://www.blauer-engel.de/en/index.php, accessed 24.04.08, various standards and other documents.

Environmental Choice New Zealand 2008, http://www.enviro-choice.org.nz/, accessed 24.04.08, various standards and other documents.

European Commission, GB Environment, EU 2008, http://ec.europa.eu/environment/ecolabel/index_en.htm, accessed 23.04.08

GEDNet, (2007), "Guidebook", found at: http://www.gednet.org/?page_id=8, accessed September 2009.

Global Eco-labelling Network (GEN) 2008, http://www.gen.gr.jp/, various documents, accessed 07.04.08

Good Environmental Choice Australia 2008, http://www.geca.org.au/, various standards and other documents, accessed 25.4.2008.

Global GreenTag (2013), various documents, http://www.globalgreentag.com/, accessed 21.10.13

Global Reporting Initiative (GRI), 2006. "Sustainability Reporting Guidelines". Amsterdam, The Netherlands, found at: GRI http://www.globalreporting.org/NR/rdonlyres/ED9E9B36-AB54-4DE1-BFF2-5F735235CA44/0/G3_GuidelinesENU.pdf, accessed January 2009.

International Agency for Research on Cancer, Monograph on the evaluation of Carcinogenic Risks to Humans, found at : http://monographs.iarc.fr/ENG/Classification/index.php, accessed 04.07.2008.

International Labour Organisation (ILO), 2009, “ILOLEX- Database of the international Labour Organisation”, found at: http://www.ilo.org/ilolex/english/index.htm, accessed January 2009.

ISEAL, 2006, “ISEAL Code of Good Practice for Setting Social and Environmental Standards, P005 - Public Version 4 - January, 2006”, The ISEAL Alliance, UK, found at:
http://www.fairtrade.net/fileadmin/user_upload/content/P005_ISEAL_Code_PD4_Jan_06.pdf , accessed October 2008.

ISO and Social Responsibility, 2008, http://www.iso.org/iso/socialresponsibility_2006-en.pdf, accessed 07.08.08.

MBDC 2008, http://www.c2ccertified.com/, various documents, accessed 22.4.2008

Pharos 2008, http://www.pharoslens.net, various documents, accessed 24.4.2008

Safety Emporium, ‘Risk Phases (R-Phases)’, Found at: http://www.ilpi.com/msds/ref/riskphrases.html, accessed August 2008.

Social Accountability International, ‘SA 8000’, 20 intl.org/index.cfm?&stopRedirect=1, accessed 6.08.08.

Stockholm Convention on Persistent Organic Pollutants (SCOPOP), 2008,
http://chm.pops.int/Convention/POPsReviewCommittee/StatusofWork/tabid/94/language/en-US/Default.aspx accessed 24.7.2008

Tasmanian Hydro 2008, ‘GRI Index’, found at:
http://www.hydro.com.au/documents/Corporate/Annual%20Reports/2007/contents/gri.html, accessed August 2008.

U.S. Department of Labor, Occupational Safety & Health Administration 2008, ‘List of Highly Hazardous Chemicals, Toxic and Reactive’, found at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9761&p_table=STANDARDS, accessed July 2008.

9.0 Appendices

9.1 Appendix A - Formaldehyde Emissions Requirements

Low Formaldehyde Emissions – requires certified products with composite / engineered wood content (e.g. floor coverings, furniture, walls and partitions, joinery) to comply with the formaldehyde emission limit benchmarks in Table IEQ-14.1 – Formaldehyde emission limit values for different testing methods. This table is reproduced from the Technical Clarifications and CIR Ruling database entry for the IEQ-14 'Formaldehyde Minimisation' Credit published on the GBCA website.

Test Protocol	Emission limit/ Unit of measurements
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	< 1.0 mg/L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.0 mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A1901 (not applicable to Plywood)	< 1.0 mg/L
ASTM D5116	<0.1 (+/- 0.0005) mg/m²hr (may also be represented as mg/m²/hr)
ISO 16000 part 9, 10 and 11 (also known as EN 13419)	<0.1 (+/- 0.0005) mg/m²hr (may also be represented as mg/m²/hr)
ASTM D6007	0.12mg/m³*
ASTM E1333	0.12mg/m³**
EN 717-1 (also known as DIN EN 717-1)	0.12 mg/m³
EN 717-2 (also known as DIN EN 717-2)	3.5 mg/m²hr (may also be represented as mg/m²/hr).

***The test report must confirm that the conditions of Table 1 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.**

**** The final results must be presented in EN 717-1 equivalent (as presented in the table), using the correlation ratio of 0.98.**

Table IEQ-14.1 – Formaldehyde emission limit values for different testing methods

9.2 Appendix B - Appendix B - TVOC Requirements

Low VOC Emissions – Requires certified products with interior fitout applications (e.g. furniture, fitout items, floor coverings, walls and partitions, joinery, storage) to comply with a Total Volatile Organic Compound (TVOC) emission limit of < 0.5 mg/item/h.

Tenancy Fitout Items

The following information is reproduced from the Technical Clarifications and CIR Ruling database entry for the IEQ-11 'VOC Minimisation' Credit published on the GBCA website as an addendum to the Green Star – Office Interiors v1.1 Technical Manual.

Workstations, walls, partitions, tables, chairs and storage units installed in the tenancy fitout must be demonstrated to be low-VOC by a National Association of Testing Authorities (NATA), or ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories or other equally qualified registered laboratory as per the 'rate-based' VOC emission limits and testing methodologies stipulated in the following table.

If the complete and finished fitout item has not undergone, or cannot for reasons of size or component variability undergo, emissions chamber testing then the following will be acceptable to demonstrate compliance:

- Evidence of emissions testing by a NATA, ISO/IEC 17025, or other equally qualified registered laboratory as per the 'rate-based' VOC emission limits and testing methodologies stipulated in the following table for all finished components of the fitout item as specified, clearly indicating that all of the surfaces have had exposure to chamber air and that the components were tested within the same time period from manufacture OR in different chambers in tandem;

- Final results from a laboratory accredited to ISO/IEC 17025 by an International Laboratory Accreditation Cooperation (ILAC) signatory for the scope of the required test(s), or other equally qualified registered laboratory presented for the entire finished item (including adhesives, sealants and any coatings). The method of calculating total emissions from the item as specified must be outlined and the laboratory must confirm that the component tests clearly demonstrate the whole-item as compliant to the 'rate-based' VOC emission limits stipulated in the following table;

- Partition(s) or storage unit(s) purchased as a part of 'workstation' may be addressed as 'workstation' or addressed separately;

- Untreated and unfinished natural materials including, but not limited to, metal, glass, stone and solid timber are deemed to comply with this credit; and

- Reused workstations, walls/partitions, tables and storage unit items are deemed-to-satisfy this credit and do not require VOC documentation.