



The New Zealand Ecolabelling Trust

Licence Criteria for Floor Coverings

EC-28-15

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Specification change history

Minor clarifications, corrections or technical changes made since the specification was last reviewed and issued in January 2012

Date	Version	Change
04/12/14	EC-28-14 December 2014	An exemption has been added to Clause 5.3.1a as a result of changes to the way that resins with residual methanol are classified under the current New Zealand HSNO regulations. The clarification would continue to allow residual methanol within resins used in engineered wood products, provided the methanol is present as a contaminant only (i.e. is not specifically added to the resin).
03/08/15	EC-28-15 August 2015	An exemption has been added to Clause 5.3.1b. The exemption clarifies the original intent of the clause. Without this exemption the current criteria have inadvertently excluded, for example, formaldehyde free binders such as polyurethane binders and natural gum rosins which once cured are no longer classified as hazardous.
		Update of Clause 5.7d (cardboard packaging) The requirement has been updated to align with the revised criteria in EC-10-14 Packaging and Paperboard Products and is consistent with cardboard packaging requirements across all relevant ECNZ specifications.

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1 Introduction

Environmental Choice New Zealand (ECNZ) is an environmental labelling programme which has been created to help businesses and consumers find products and services that ease the burden on the environment. The programme results from a New Zealand Government initiative and has been established to improve the quality of the environment by minimising the adverse and maximising the beneficial environmental impacts generated by the production, distribution, use and disposal of products, and the delivery of services. The programme is managed by the New Zealand Ecolabelling Trust (The Trust).

ECNZ operates to the ISO 14024:1999 standard "Environmental labels and declarations – Type I environmental labelling – Principles and procedures" and The Trust is a member of the Global Ecolabelling Network (GEN) an international network of national programmes also operating to the ISO 14024 standard.

ISO 14024 requires environmental labelling specifications to include criteria that are objective, attainable and verifiable. It requires that interested parties have an opportunity to participate and have their comments considered. It also requires that environmental criteria be set, based on an evaluation of the environmental impacts during the actual product or service life cycle, to differentiate product and services on the basis of preferable environmental performance.

The life cycle approach is used to identify and understand environmental issues (adverse or beneficial impacts) across the whole life of a product or service (within a defined product or service category). This information is evaluated to identify the most significant issues and from those to identify the issues on which it is possible to differentiate environmentally preferable products or services from others available in the New Zealand market. Criteria are then set on these significant and differentiating issues. These must be set in a form and at a level that does differentiate environmentally preferable products or services, is attainable by potential ECNZ licence applicants and is able to be measured and verified. As a result of this approach, criteria may not be included in an ECNZ specification on all aspects of the life cycle of a product or service. If stages of a product or service life cycle are found not to differentiate environmentally preferable products or services, or to have insufficient data available to allow objective benchmarking in New Zealand, those stages will not generally be included in criteria in the specification. For some issues, however, (such as energy and waste) criteria may be set to require monitoring and reporting. These criteria are designed to generate information for future reviews of specifications.

The New Zealand Ecolabelling Trust Board is pleased to publish this specification for Floor Coverings. The specification has been published to take account of substances harmful to the environment, energy management and consumption of resources.

This specification sets out the requirements that flooring products will be required to meet in order to be licensed to use the ECNZ Label. The requirements include environmental criteria and product characteristics prepared based on an overview level of a life cycle assessment, information from specifications for similar products from other GEN member labelling programmes and relevant information from other ECNZ specifications. The specification also defines the testing and other means to be used to demonstrate and verify conformance with the environmental criteria and product characteristics.

This specification is valid for a period of five years. Twelve months before the expiry date (or at an earlier date if required), the Trust will initiate a further review process for the specification.

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2 Background

The impact on the environment of floor covering products occurs throughout the lifecycle from the raw materials through to manufacturing of and disposal of the flooring product.

Raw materials may be sourced from natural and renewable resources, for example, wood and natural fibres or from non-renewable resources, for example plastic polymers from hydrocarbons. Harvesting of wood and natural materials can have significant impacts on forest environmental values and communities. Sourcing wood from sustainably managed forests will help to protect these values.

Encouraging reuse and recycling of non-renewable resources will help to reduce the impacts associated with mining and extracting these resources.

Processing of the materials used in flooring products can involve using hazardous substances including a wide range of preservatives, biocides, pesticides, dyes, heavy metal additives, degreasing and cleaning agents, formaldehyde, solvents, adhesives and flame retardants. Some of these substances are carcinogenic, mutagenic, toxic, ecotoxic, harmful to human reproductive systems. Discharges of these substances from processing operations can have adverse impacts on the environment and people.

Some of the hazardous substances used in manufacturing can also become incorporated in the materials and can result in discharges from the finished flooring product. These can have adverse effects on human health during use, for example, carcinogenic formaldehyde emissions in indoor environments from some wood panel flooring, and emissions of other volatile organic compounds (VOCs).

Surface coatings or treatments are applied to many of the materials used in flooring products. These can be important to provide protection and help to prolong the useful life of the product. Resins and adhesives may also be used in flooring products. Surface coatings, treatments and the use of resins and adhesives may involve using hazardous substances and restrictions on these will also help to reduce the adverse impacts of these processes on the environment.

Another significant potential environmental impact associated with the manufacture of flooring products, results from using adhesives and resins. Controls on adhesives and resins used in manufacturing will help to reduce adverse impacts from these products.

As some of the most significant adverse impacts in the life cycle of flooring products result from sourcing and producing the raw materials (including the associated use of hazardous substances), encouraging features that ensure products are durable and have a long life, will help to reduce the overall burden of these products on the environment. Encouraging features that allow for reuse and recycling will also prolong the effective life of the raw materials used in manufacturing.

Of the GEN-member specifications reviewed, the Nordic Ecolabelling of Floor Coverings, Blue Angel (Germany), EU Eco label, EcoLogo (Canadian) and Australian programmes have criteria specifically for flooring products. Many of the criteria in the existing ECNZ Furniture and Fittings (EC-32-11) and Interior Linings (EC-46-11) specifications have also been included in this specification, especially in relation to wood-based products and polymers. This specification also includes standard criteria on legal requirements, energy, waste and packaging which are being incorporated into all ECNZ specifications when they are developed or reviewed.

Requirements are also set to provide information to builders and consumers about moisture in the layer underneath the floor covering - to avoid the formation of chemicals, fungus and bacterial growth, as found in "sick buildings". The specification also requires information to be provided on

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recommended adhesives, agents and methods for cleaning and maintenance and on how the flooring may be maintained and renovated (e.g. by means of sanding).

Based on a review of currently available information, the following product category requirements will produce environmental benefits by:

- reducing hazardous substance use, discharges and emissions to the environment;
- reducing the exposure of people to hazardous substances;
- encouraging the use of renewable resources and sustainable management of renewable resources;
- minimising waste; and
- improving energy efficiency and conservation.

As information and technology change, product category requirements will be reviewed, updated and possibly amended.

3 Interpretation

Blowing agent means a substance (gas, liquid) that is able to produce cells in the plastic structure of a foam. This process can vary according to the property of the substance, e.g. a liquid may develop cells when changing into gas and a gas may expand when pressure is released.¹

CFCs means Chlorofluorocarbons.

CITES means the Convention on International Trade in Endangered Species.

EMS means Environmental Management Systems

Energy Management Programme means a programme to achieve and sustain efficient and effective use of energy including policies, practices, planning activities, responsibilities and resources that affect the organisation's performance for achieving the objectives and targets of the Energy Policy.

Engineered wood products are composites of wood and resin. Examples are medium density fibreboard (MDF), particleboard and plywood.

FSC refers to the Forest Stewardship Council.

GEN means Global Ecolabelling Network.

Global Warming Potential (GWP) is a measure of how much a gas is estimated to contribute to global warming. It is a relative scale that compares the contribution of the gas to that of the same mass of carbon dioxide (CO₂), which has a GWP of 1, over a defined time frame. E.g. methane has a GWP of 21 (100-year time frame). This means that, over 100 years, methane will be approximately 21 times more heat-absorptive than CO₂ per unit of weight².

HCFCs means hydrochlorofluorocarbons.

HFCs means hydrofluorocarbons.

ISO means International Organisation for Standardisation.

Label means the Environmental Choice New Zealand Label.

¹ Published by the German Technical Cooperation – Programme Proklima and commissioned by the German Federal Ministry for Economic Cooperation and Development

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Ozone Depleting Potential is a relative value that indicates the potential of a substance to destroy ozone gas (and thereby damage the Earth's ozone layer) as compared with the impact of a similar mass of chlorofluorocarbon-11 (CFC-11). CFC-11 is assigned a reference value of 1. E.g. a substance with an ODP of 2 is twice as harmful to the ozone layer as CFC-111.

Preservative Treatments means biocide, fungicide, insecticide or other preservative.

Recycled includes:

- **Post-Consumer:** Material generated by households, or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.
- **Pre-Consumer:** Material diverted from the waste stream during a manufacturing process. Excluded is re-utilisation of materials generated in a process and capable of being reclaimed within the same process that generated it.

Safety Data Sheet (SDS) means a document that describes the properties and uses of a substance, that is, identity, chemical and physical properties, health hazard information, precautions for use and safe handling information in accordance with the New Zealand Chemical Industry Council – Preparation of Safety Data Sheets Code of Practice.

Shall not be added means deliberate additions to a product or its components. This can be verified by declarations and examination of the input material documentation (SDS for steel, nylon or dyes for example).

Shall not be used during the production processes refers to any additions that are used in the process and that do not necessarily remain in the final product (for example degreasing, bleaching). This shall apply to the licence applicant/holder and first tier suppliers. This can be verified by declarations and SDS of substances used in production processes.

Wood Treatment means biocide, fungicide, insecticide or other preservative.

Waste Management Programme means a programme to achieve and sustain efficient and effective minimisation and disposal of waste including policies, practices, planning activities, responsibilities and resources that affect the organisation's performance for achieving the objectives and targets of the Waste Policy.

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4 Category definition

This category includes floor coverings that:

- are fixed to the floor and laid on top of an underlying foundation of concrete or wood/beams; and
- are intended for indoor use.

The flooring product must comprise at least 90% by weight of one or more of the materials covered in clauses 5.2.1 – 5.2.5 of this specification. No other single material shall comprise more than 5% weight.

Excluded from this category are:

- floor coverings applied in a liquid state;
- mineral floor coverings such as stone, ceramic tile, marble, granite (to be covered in an ECNZ specification currently being developed);
- carpets and rugs. (covered in other ECNZ specifications); and
- floor coverings with integrated heating.

To be licensed to use the Label, Floor Coverings must meet all of the environmental criteria set out in clause 5 and product characteristics set out in clause 6.

Product information required:

Licence applicants must provide the following information to The Trust as part of the assessment process. Licence holders must maintain and update this information and advise The Trust about any changes to this information.

- a product description including a list of components, their suppliers, material type and % by weight of the finished product (see Table 1 in Appendix A);
- component and process supplier information (see Table 2 in Appendix A);
- substances and hazardous materials used in the production of the flooring product (see Table 3 in Appendix A).

Explanatory notes

Completed tables of information will be attached to and form part of the Applicant's Statement on Compliance required to be signed by applicants during the licence assessment and confirmed by licence holders during licence supervision assessments.

Changes to information, in particular to products and suppliers, will require assessment before they can be confirmed on an ECNZ licence.

5 Environmental criteria

5.1 Legal requirements

Criteria

- a The product must comply with the provisions of all relevant environmental laws and regulations that are applicable during the product's life cycle.
- b Significant component manufacturing or processes involved in the production of the flooring product may not be under the direct control of a licence applicant/holder. Where this is the case, the licence applicant/holder must have and implement a formal supplier regulatory compliance management/assurance programme that:
 - includes documented requirements for suppliers to provide components or services compliant with applicable environmental regulatory requirements (for example in supply contract conditions);
 - identifies suppliers, materials or processes that involve, or would be expected to be subject to a high level of regulatory control and/or which present a risk of regulatory non-compliance;
 - includes appropriate requirements (based on the risk assessment) for suppliers to provide assurance to the licence applicant//holder on the supplier's environmental regulatory compliance.

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement on regulatory compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by documentation identifying the applicable regulatory requirements and demonstrating how compliance is monitored and maintained. In cases where there is a high potential risk associated with environmental regulatory compliance and limited assurance provided by the licence applicant/holder's supplier regulatory compliance management programme, The Trust's assessor may require an on-site inspection at the relevant supplier's premises.

Explanatory notes

Relevant laws and regulations could, for example, include those that relate to:

- producing, sourcing, transporting, handling and storing raw materials and components for manufacture;
- manufacturing processes;
- handling, transporting and disposing of waste products arising from manufacturing;
- transporting product within and between countries;
- using and disposing of the product.

The documentation required may include, as appropriate:

- procedures for approving and monitoring suppliers and supplies;
- information provided to customers and contractors regarding regulatory requirements.

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Assurance and/or information that licence applicants/holders may require from their suppliers could include:

- evidence of a formal certified environmental management system (for example an ISO 14001 certificate) and supporting records on regulatory compliance (for example, copies of regulatory requirements registers, procedures to manage regulatory compliance, monitoring and evaluation reports on regulatory compliance, internal or external audits covering regulatory compliance and management review records covering regulatory compliance);
- copies of published environmental, sustainability and/or annual reports expressly addressing environmental regulatory compliance (for example verified Environmental Statements prepared under the European EMAS regulations);
- audit reports completed by independent and competent auditors addressing regulatory compliance (for example, reports for other eco-label licences or reports from regulator audits);
- participation by the supplier in the licence applicants/holders own supplier audit programme.

It is not intended to require licence holders to accept increased legal responsibility or liability for actions that are outside their control. The Trust's intention is to ensure any potential for environmental regulatory non-compliance associated with an ECNZ labelled product is managed to a level that minimises risk of reputation damage to the ECNZ label and programme.

5.2 Material types

The flooring product shall meet the requirements for the relevant material set in criteria 5.2.1 to 5.2.8 if that material contributes more than 5% of the weight of the finished product, unless otherwise specified (i.e. for PVC in clause 5.2.5).

5.2.1 Solid wood

Criteria

The wood included in the floor covering must meet either requirement (a) or (b) below.

a The product must be made from recycled wood.

OR

b A minimum of 50% by weight of the wood in the floor covering must be from plantations or forests certified as sustainably managed under the Forest Stewardship Council (FSC) or equivalent schemes;

And

The licensee must ensure that raw materials do not come from forest environments that are protected for biological and/or social reasons.

c Companies relying on option (b) above must:

- maintain records of the certification of wood used in licensed products; and
- have, implement and report on an ongoing programme to review options and increase Forest Stewardship Council or equivalent certified content in licensed products.

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Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on regulatory compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by documentation (as relevant):

- recording the supplier, nature and geographical source of all wood inputs to the floor covering;
- demonstrating the wood is recycled;
- including certificates or other evidence on forest management certification and chain of custody (to confirm the wood that is used is from a certified sustainably managed source);
- describing management systems in place to ensure that these requirements are consistently met;
- describing the programme to review options and increase FSC or equivalent certified wood content in licensed products, and
- including annual reports to ECNZ on this procurement programme.

Explanatory notes

The following certification schemes will be accepted as equivalent to FSC certification:

- Programme for the Endorsement of Forest Certification schemes (PEFC) (<http://www.pefc.org/>)
- Canadian Standards Association (CSA) National Standard for Sustainable Forest Management (<http://www.fpac.ca/>)
- Sustainable Forestry Initiative® (SFI) (<http://www.aboutsfi.org/>).

The Trust will also recognise Sustainable Forest Management Plans, supported with Annual Logging Plans, that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993) as equivalent to FSC certification standards for sustainable forest management. These Plans must be prepared in accordance with Standards and Guidelines for the Sustainable Management of Indigenous Forests and guidance for preparing Sustainable Management Plans and Annual Logging Plans. Wood sourced from New Zealand indigenous forests covered by approved plans will be accepted as equivalent to FSC sustainably managed forest certification provided compliance with the approved plans is demonstrated through independent on-site assessment.

For any other schemes to be considered, the applicant will be required to provide detailed information that demonstrates the certification scheme is credible and equivalent. For examples of the type of information required, refer to the UK Central Point of Expertise on Timber Procurement (CPET) assessments of certification schemes available on www.proforest.net/cpet.

FSC and PEFC certification schemes each have a range of certificates/labels. Some of these allow for wood/fibre from certified sustainably managed plantations or forests to be mixed with non-certified wood/fibre. Under FSC Mixed Credit or PEFC Volume Credit methods, wood/fibre or products associated with a certification claim or label may or may not actually contain wood/fibre from the certified source. Certifications accepted by The Trust are those which will ensure that the required minimum percentages of wood from sustainably managed forests, as required by Clause 5.2.1, will be actually present in the final ECNZ-licensed product. These are set out below.

Types of FSC certificates which can be used to demonstrate compliance with the above requirements:

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- FSC Pure
- FSC Mixed X % - provided the % is > 50 %
- FSC Mixed Credit – only if the manufacturer can demonstrate that actual FSC material is used for the ECNZ products
- FSC Recycled – provided it contains 100% recycled material.

FSC Controlled Wood cannot be used to meet the minimum 50 % certified fibre requirement in Clause 5.2.1 b).

Types of PEFC certificates which can be used to demonstrate compliance with the above requirements:

- PEFC Certified – Average Percentage method
- PEFC Certified – Volume Credit method – only if the manufacturer can demonstrate that actual PEFC material is used for the ECNZ products
- PEFC Certified and Recycled – provided it contains 100% recycled material.

PEFC Non-Controversial Sources material cannot be used to meet the minimum 50 % certified fibre requirement in Clause 5.2.1 b).

The Trust intends to monitor levels of forestry certification and used of certified wood in solid wood floor products, with the expectation that the 50 % minimum requirement for wood will be increased when a higher level is attainable.

5.2.2 Engineered wood

Criteria

a Annually, either i, ii or iii must be fulfilled:

i At least 30 % of all wood purchased for the flooring, the engineered wood components or products must consist of wood from plantations or forests certified as sustainably managed under the Forest Stewardship Council or equivalent schemes.

OR

ii at least 40% of all wood purchased for the flooring, the engineered wood components or products must consist of sawdust/ wood chips and /or waste wood from wood processing operations, forest harvesting waste and/or untreated demolition and/or recycled fibre.

OR

iii at least 40 % of all wood purchased for the flooring engineered wood components or products must consist of wood from a combination of sources described in (i) and (ii) above.

AND

The licensee must ensure that raw materials do not come from forest environments that are protected for biological and/or social reasons.

b Companies must:

- maintain records of the type and percentage of each wood fibre used in licensed products; and
- have, implement and report on an ongoing programme to review options and increase recycled/waste/by-product fibre or FSC (or equivalent) certified content in licensed products.

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Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on regulatory compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by documentation (as relevant):

- recording the supplier, nature and geographical source of all wood inputs;
- including certificates or other evidence on forest management and certification; and
- describing management systems in place to ensure that these requirements are consistently met;
- describing the programme to review options and increase FSC or equivalent certified wood or recycled/waste fibre content in licensed products; and
- including annual reports to ECNZ on this improvement programme.

Explanatory notes

The following certification schemes will be accepted as equivalent to FSC certification:

- Programme for the Endorsement of Forest Certification schemes (PEFC) (<http://www.pefc.org/>)
- Canadian Standards Association (CSA) National Standard for Sustainable Forest Management (<http://www.fpac.ca/>)
- Sustainable Forestry Initiative® (SFI) (<http://www.aboutsfi.org/>).

The Trust will also recognise Sustainable Forest Management Plans, supported with Annual Logging Plans, that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993) as equivalent to FSC certification standards for sustainable forest management. These Plans must be prepared in accordance with Standards and Guidelines for the Sustainable Management of Indigenous Forests and guidance for preparing Sustainable Management Plans and Annual Logging Plans (see footnotes for clause 5.2.1 for relevant references). Wood sourced from New Zealand indigenous forests covered by approved plans will be accepted as equivalent to FSC sustainably managed forest certification provided compliance with the approved plans is demonstrated through independent on-site assessment.

For any other schemes to be considered, the applicant will be required to provide detailed information that demonstrates the certification scheme is credible and equivalent. For examples of the type of information required, refer to the UK Central Point of Expertise on Timber Procurement (CPET) assessments of certification schemes available on www.proforest.net/cpet.

FSC and PEFC certification schemes each have a range of certificates/labels. Some of these allow for wood/fibre from certified sustainably managed plantations or forests to be mixed with non-certified wood/fibre. Under FSC Mixed Credit or PEFC Volume Credit methods, wood/fibre or products associated with a certification claim or label may or may not actually contain wood/fibre from the certified source. Certifications accepted by The Trust are those which will ensure that the required minimum percentages of fibre from sustainably managed forests, as required by Clause 5.2.2, will be actually present in the final ECNZ-licensed product. These are set out below.

Types of FSC certificates which can be used to demonstrate compliance with the above requirements:

- FSC Pure

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- FSC Mixed X %
- FSC Mixed Credit – only if the manufacturer can demonstrate that actual FSC material is used for the ECNZ products
- FSC Recycled

FSC Controlled Wood cannot be used to meet the minimum 40 % certified fibre requirement in Clause 5.2.2 a) iii).

Types of PEFC certificates which can be used to demonstrate compliance with the above requirements:

- PEFC Certified – Average Percentage method
- PEFC Certified – Volume Credit method – only if the manufacturer can demonstrate that actual PEFC material is used for the ECNZ products
- PEFC Certified and Recycled

PEFC Non-Controversial Sources material cannot be used to meet the minimum 40 % certified fibre requirement in Clause 5.2.2 a) iii).

The Trust intends to monitor levels of forestry certification, the use of certified wood in engineered wood flooring products and achievable levels of recycled and waste fibre content, with the expectation that the minimum percentage requirements will be increased when higher levels are attainable.

5.2.3 Bamboo

Criteria

- A minimum of 50% by weight of the bamboo in the floor covering must be from plantations licensed under the Forest Stewardship Council (FSC) or equivalent schemes; and the licensee must endeavour to ensure that raw materials do not come from forest environments that are protected for biological and/or social reasons.
- Bamboo flooring must not be manufactured from bamboo species that appear on the Convention on International Trade in Endangered Species (CITES) list.
- Companies must:
 - maintain records of the certification of bamboo fibre used in licensed products
 - have, implement and report on an ongoing programme to review options and increase FSC or PEFC or equivalent SFM-certified content in ECNZ licensed products.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant company. The statement shall be supported by documentation (as relevant):

- recording the supplier, nature and geographical source of all bamboo inputs to the floor covering;
- including certificates or other evidence on forest management, certification and chain of custody;

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- describing management systems in place to ensure that these requirements are consistently met;
- describing the programme to review options and increase FSC or equivalent certified bamboo content in licensed products; and
- including annual reports to ECNZ on this procurement programme.

Explanatory notes

Types of FSC certificates which can be used to demonstrate compliance with the above requirements:

- FSC Pure
- FSC Mixed X % - provided the % is > 50 %
- FSC Mixed Credit – only if the manufacturer can demonstrate that actual FSC material is used for the ECNZ products
- FSC Controlled bamboo – does not meet the ECNZ requirements
- FSC Recycled – provided it contains 100% recycled material.

Please note, the above are types of FSC certificates or sales documents. FSC labels use different wording and have different minimum content requirements.

The following certification schemes will be accepted as equivalent to FSC certification where certificates are expressly issued for bamboo:

- Programme for the Endorsement of Forest Certification schemes (PEFC) (<http://www.pefc.org/>)
- Canadian Standards Association (CSA) National Standard for Sustainable Forest Management (<http://www.fpac.ca/>)
- Sustainable Forestry Initiative® (SFI) (<http://www.aboutsfi.org/>).

For any other scheme's, such as programmes run by the International Network for Bamboo and Rattan (INBAR) to be considered, the applicant will be required to provide detailed information that demonstrates the certification scheme is credible and equivalent. For examples of the type of information required, refer to the UK Central Point of Expertise on Timber Procurement (CPET) assessments of certification schemes available on www.proforest.net/cpet.

The Trust intends to monitor levels of bamboo certification with the expectation that the minimum percentage requirements will be increased when higher levels are attainable.

5.2.4 Cork

Criteria

The licence applicant/holder and or flooring manufacturer must:

- i have a policy for sustainable material procurement for cork and a system to trace and verify the origin of cork;
- ii maintain records of any certification of cork material used in licensed products; and
- iii have, implement and report on an ongoing programme to review options to include Forest Stewardship Council or equivalent certified cork content in licensed products.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant company. The statement shall be supported by documentation (as relevant):

- recording the supplier, nature and geographical source of cork inputs to the floor covering;
- describing management systems in place to ensure that these requirements are consistently met;
- describing the programme to review options to include FSC or equivalent certified content in licensed products; and
- including annual reports to ECNZ on this procurement programme.

NOTE: The Trust intends to monitor levels of forestry certification, with the expectation that minimum requirements for cork will be set in future specification reviews.

5.2.5 PVC

Criteria

Information shall be provided to ECNZ at application and thereafter reported annually on ALL PVC and/or phthalates used in the floor covering. This should include information from production records and/or suppliers on:

- i the percentages by weight of recycled and virgin PVC;
- ii the particular production processes (membrane cells, non asbestos diaphragms, modified diaphragms, graphite anodes, mercury cells, closed-lid production etc) used to produce chlorine and VCM for the PVC being used in an ECNZ-licensed floor covering (including the locations of the production);
- iii information, where available, on waste disposal, wastewater treatment and emissions to air (occupational exposure, emissions from the factory and emissions from the final PVC resin);
- iv information on any Environmental Management System (EMS) for the production process, including requirements for waste, water, air and product-related requirements;
- v the types of stabilisers used;
- vi the types and amounts of any phthalate plasticisers present in recycled content of the PVC (if that information is available) and/or added when manufacturing PVC;

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- vii research and initiatives implemented on substitutes for phthalates identified as of concern by regulators; and
- viii any product stewardship arrangements for the PVC

NOTE: Regulators have identified the following phthalates to be of concern – dibutyl phthalate (DBP), diisobutyl phthalate (DIBP), butyl benzyl phthalate (BBP), di-n-pentyl phthalate (DnPP), di(2-ethylhexyl) phthalate (DEHP), di-n-octyl phthalate (DnOP), diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP). These phthalates may be prohibited by the Hazardous Substances criteria in clause 5.3.

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by appropriate documentation of product specifications, production methods, calculations and quality controls including, initial and ongoing annual reports to ECNZ on PVC and plasticisers used.

5.2.6 Polymers and plastics

Criteria

Information shall be provided to ECNZ at application and thereafter reported annually on polymers and plastics used in the floor covering or part of the connection systems. This should include information from production records and/or suppliers on:

- i The types of plastics used and the main function in the flooring product;
- ii the percentages by weight of recycled and virgin polymer or plastic;
- iii information, where available, on waste disposal, wastewater treatment and emissions to air from manufacturing processes;
- iv information on any Environmental Management System (EMS) for the production process, including requirements for waste, water, air and product-related requirements;
- v the types of stabilisers, plasticisers or other additives used; and
- vi any product stewardship arrangements for the polymer or plastic..

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by appropriate documentation of product specifications, production methods, calculations and quality controls including:

- records of the types of polymers or plastics used; and
- initial and ongoing annual reports to ECNZ on polymers or plastics used.

NOTE: PVC is excluded from this criterion as it is covered under 5.2.5 and the use of some phthalates or additives may be prohibited by the Hazardous Substances criteria in clause 5.3.1.

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5.2.7 Rubber

Criteria

The licence applicant/holder and or flooring manufacturer must:

- i have, implement and report on a procurement policy to prefer natural rubber and /or recycled rubber and to avoid or minimise the use of hazardous additives;
- ii have a system to trace and verify the origin of any natural rubber;
- iii maintain records of any certification of rubber material used in licensed products; and
- iv have, implement and report on an ongoing programme to review options to include Forest Stewardship Council or equivalent certified rubber content in licensed products..

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant company. The statement shall be supported by documentation (as relevant):

- demonstrating the rubber is recycled, if applicable;
- recording the supplier, nature and geographical source of all rubber inputs (including synthetics) to the floor covering;
- where applicable for natural rubber including certificates or other evidence on forest management and certification;
- identifies the hazardous additives used in production of rubber (including CAS No, where available);
- includes Safety Data Sheets for relevant substances;
- describing management systems in place with relevant quality control and production documentation to ensure that these requirements are consistently met; and
- includes an initial and annual reports to ECNZ on the procurement programme and additives used (including SDS sheets) .

NOTE: The use of some phthalates or additives may be prohibited by the Hazardous Substances criteria in clause 5.3.1.

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5.2.8 Linoleum

Criteria

The licence applicant/holder and or flooring manufacturer must:

- i have, implement and report on a procurement policy to prefer material from sustainably managed sources or from waste and/or recycled sources; and
- ii collect and record and report information on the environmental attributes of materials, suppliers and the supply of material from managed sources such as Forest Stewardship Council or equivalent in licensed products.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant company. The statement shall be supported by documentation (as relevant):

- recording the supplier, nature and where possible the geographical source of material inputs to the floor covering;
- includes an initial and annual reports to ECNZ on the procurement programme
- describing management systems in place to ensure that these requirements are consistently met. and
- includes an initial and annual reports to ECNZ on the environmental attributes and supply of materials from managed sources.

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5.3 Hazardous substances

The criteria in clauses 5.3.1 and 5.3.2 apply to all materials including surface treatments in the product and all processes used by the licence applicant/ holder, their component suppliers and sub-contractors, unless otherwise specified.

5.3.1 General hazardous substances

The following are exempt from Clause 5.3.1:

- Trace levels (<0.1 % by weight) of substances reported in SDS to be potentially present as contaminants or impurities in raw materials or component substances;
- Recycled content that may have been treated or produced with the prohibited substances during its previous lifecycle.

Criteria

- a No substance shall be added to the flooring product or used during the production processes that are classified as carcinogenic, harmful to the reproductive system or genetically harmful.

The following are exempt from clause a):

- wood dust (which is physically and chemically bound in the product);
- formaldehyde (which is specifically controlled by requirements in Clauses 5.3.6 (Engineered Wood Products), 5.3.3 (Manufacturing Adhesives) and 5.3.4 (Surface Treatments) and 5.4 (Emissions to Air));
- residual methanol present as a contaminant in raw materials used in engineered wood products;
- 1,3 butadiene, N-nitrosamines, styrene used in the production of rubber; and
- VCM and EDC in the production of PVC.

NOTE: Under current HSNO classifications, GHS classifications or EU Risk phrases, this clause will preclude the use of certain phthalates including DEHP and DBP, certain aziridine compounds, certain preparatory treatments and certain plastics.

- b The floor covering must not be manufactured from more than 0.1% by weight (in total) of substances that are classified as acutely toxic, skin irritants or respiratory or contact sensitizers.

The following are exempt from this clause:

- Substances or materials classified as skin irritants or respiratory or contact sensitizers which change their properties through processing and thus become no longer bioavailable (ie physically and chemically bound in the product), or undergo chemical modification in a way that removes the previously identified hazard.
- formaldehyde (which is specifically controlled by requirements in Clauses 5.3.6 (Engineered Wood Products), 5.3.3 (Manufacturing Adhesives) and 5.3.4 (Surface Treatments) and 5.4 (Emissions to Air)).

- c Substances added to the flooring product or used during the production processes that are classified as 9.1 ecotoxic under the New Zealand Hazardous Substances Regulations, must be in accordance with the limits below:

- 2% in total, by weight, calculated as follows:
- Cumulative total (%w/w) = %w/w 9.1A + %w/w 9.1B + %w/w 9.1C + %w/w 9.1D x 0.1

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- 1% by weight of any single substance classified 9.1A, 9.1B or 9.1C
- 5% (or 10%) by weight of any single substance classified 9.1D.

The following is exempt from clause c): Surface treatments specifically covered under 5.3.4

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant Company. This statement shall be supported by a completed table 3 in appendix A identifying all substances and additives added to the flooring product, and documentation that:

- includes Material Safety Data Sheets for hazardous substances;
- identifies the HSNO classifications that apply to each substance;
- demonstrates that thresholds for groups or individual hazardous substance ingredients/raw materials are not exceeded in each floor covering product;
- relevant quality control and production documentation; and
- includes, for products containing allergenic substances, an analysis report (prepared by an independent laboratory) on the proportion of allergenic substances in the final flooring. Sampling and analysis must be suited to the substance(s) in question.

NOTE: Compliance with the requirements in 5.3.1 may be demonstrated by providing data indicating that the substance does not have any of the classifications (or combinations thereof) listed in Table 3 (Appendix B).

5.3.2 Requirements for specific substances

Criteria

- a The following substances must not be actively added to the floor covering or used during the production processes:
 - Chlorinated/brominated paraffins
 - Halogenated organic substances or solvents including methylene chloride, binding agents and flame retardants
 - Organic tin catalysts may only be used in the production of flexible polyurethane if the manufacturer has in place a contract with a hazardous waste disposal company for the disposal of the waste and can demonstrate that the hazardous waste is correctly disposed of.
- b Blowing agents with a global warming potential (GWP) of more than 140, measured over a 100 year time frame must not be used.
- c Blowing agents must have an ozone depleting potential (ODP) of zero.

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d The following substances shall not be added to the flooring product, used during the production processes:

- Arsenic
- Cadmium
- Chromium (vi) compounds
- Copper
- Lead
- Mercury

Pigments, additives, catalysts and stabilisers are included in these requirements

The following are exempt from clause d:

- contaminants in products in concentrations up to 1 mg/kg floor covering in the case of Hg and Cd and 10 mg/kg floor covering in the case of Pb;
- PVC (which is specifically controlled by requirements in 5.2.5 PVC);
- Copper that is included in a metal alloy i.e. decorative trim;
- Copper phthalocyanine dyes or pigments.

NOTE: The Trust intends to monitor information on PVC obtained from 5.2.5 PVC and may in future remove this exemption for PVC.

e Azo-based dyes that shed carcinogenic aryl amines (listed below) must not be used.

	CAS no.
– 4-aminodiphenyl	(92-67-1)
– Benzidine	(92-87-5)
– 4-chloro-o-toluidine	(95-69-2)
– 2-naphthylamine	(91-59-8)
– o-amino-azotoluene	(97-56-3)
– 2-amino-4-nitrotoluene	(99-55-8)
– p-chloroaniline	(106-47-8)
– 2,4-diaminoanisol	(615-05-4)
– 4,4'-diaminodiphenylmethane	(101-77-9)
– 3,3'-dichlorobenzidine	(91-94-1)
– 3,3'-dimethoxybenzidine	(119-90-4)
– 3,3'-dimethylbenzidine	(119-93-7)
– 3,3'-dimethyl-4,4'-diaminodiphenylmethane	(838-88-0)
– p-cresidine	(120-71-8)
– 4,4'-methylene-bis-(2-chloraniline)	(101-14-4)
– 4,4'-oxydianiline	(101-80-4)
– 4,4'-thiodianiline	(139-65-1)
– o-toluidine	(95-53-4)
– 2,4-diaminotoluene	(95-80-7)
– 2,4,5-trimethylaniline	(137-17-7)

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–	4-aminoazobenzene	(60-09-3)
–	o-anisidine	(90-04-0)
–	2,4-Xylidine	(87-62-7)
–	2,6-Xylidine	(95-68-1)

Source: specified in the fifth Addendum to the German ordinance on consumer goods: German ban of use of certain azo compounds in some consumer goods, ETAD information notice no. 6, Ecological and Toxicological Association of Dyes and Organics, November 1995

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the Applicant company. This statement shall be supported by a completed table 3 in appendix A identifying all substances and additives added to the flooring product, and documentation that::

- includes Material Safety Data Sheets for hazardous substances
- identifies the HSNO classifications that apply to each substance
- demonstrates that thresholds for groups or individual hazardous substance ingredients/raw materials are not exceeded in each floor covering product
- identifies the blowing agents used and their ODPs and GWP;
- includes records of disposal of hazardous waste from the use of organic tin
- relevant quality control and production documentation
- includes, for products containing allergenic substances, an analysis report (prepared by an independent laboratory) on the proportion of allergenic substances in the final flooring. Sampling and analysis must be suited to the substance(s) in question
- a declaration from the dye manufacturer stating that the aromatic/aryl amines listed in 5.3 e are not shed from the specified azo dyes.

Explanatory notes

GWP and ODP of common blowing agents are given in Appendix C. For determining the ODP and GWP of substances not included in Appendix C, reference should be made to one of the following:

- Daniel, J.S., and G.J.M. Velders (Lead Authors), A.R. Douglass, P.M.D. Forster, D.A. Hauglustaine, I.S.A. Isaksen, L.J.M. Kuijpers, A. McCulloch, and T.J. Wallington, Halocarbon scenarios, ozone depletion potentials, and global warming potentials, Chapter 8 in Scientific Assessment of Ozone Depletion: 2006, Global Ozone Research and Monitoring Project— Report No. 50, 572 pp., World Meteorological Organization, Geneva, Switzerland, 2007. http://www.wmo.ch/pages/prog/arep/gaw/ozone_2006/ozone_asst_report.html
- US EPA Ozone Depleting Substances website <http://www.epa.gov/ozone/science/ods/index.html>
- Forster, P., V. Ramaswamy, P. Artaxo, T. Berntsen, R. Betts, D.W. Fahey, J. Haywood, J. Lean, D.C. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz and R. Van Dorland, 2007: Changes in Atmospheric Constituents and in Radiative Forcing. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M.

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Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. <http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>

If alternative reference sources are used, Environmental Choice will require full details of the reference source or a copy of the document, if it is not readily and freely available.

5.3.3 Manufacturing adhesives

Criteria

- a No adhesives that are classified toxic shall be used in the flooring products.
- b If there is more than 50g (wet adhesive) in the finished product, the adhesive must not be classified as ecotoxic.
- c The adhesives may contain a maximum of 5 % organic compounds with boiling point <260 °C.
- d The adhesive must not be formulated with alkylphenoethoxylates, alkylphenols or halogenated solvents.
- e The content of free formaldehyde in adhesives used in the product shall not exceed 0.5 % by weight of the adhesive.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by a completed table 3 in appendix A identifying all manufacturing adhesives used and documentation that:

- includes Safety Data Sheets for the adhesives;
- identifies classifications that apply to each adhesive;
- demonstrates that thresholds for groups or individual hazardous substances are not exceeded in each adhesive product; and
- includes composition data and calculations for formaldehyde in adhesives.

Compliance with the requirements in a) and b) may be demonstrated by providing data indicating that the substance does not have any of the classifications (or combinations thereof) listed in Table 3 (Appendix B) for toxins or ecotoxins.

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5.3.4 Surface treatments

The criteria below apply where the treatment amounts to more than 5 % by weight in the finished product.

Criteria

- a The surface treatment process must meet either (i) or (ii).
 - i Content and classification of the surface treatment agents:
The treatment substances must not:
 - be classified ecotoxic; and
 - contain more than 7 % by weight x efficiency of organic solvents (boiling point <250 oC).OR
 - ii Calculation of applied quantity of ecotoxic and organic solvent substances:
 - The flooring product may be treated with a maximum of 14 g/m² of substances that are classified as ecotoxic; and
 - The amount of organic solvent (boiling point <250 oC) added in the surface treatment must not exceed 35 g/m².
- NOTE:** these options are to provide greater flexibility in the choice of surface treatment systems. It should not to be interpreted that i) is for non-ecotoxic substances and ii) is for ecotoxic substances.
- b The content of aromatic solvent in products must not exceed 1 % w/w.
 - c Where a surface treatment is applied and the treatment substance or preparation contains formaldehyde, formaldehyde emissions from the treated component shall not exceed 1.0 mg/l. (For surface laminations onto a wood-based product, the substrate edges must be sealed for testing).

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by a completed table 3 in appendix A identifying all surface treatments used and documentation that:

- includes Safety Data Sheets for the treatment substances;
- identifies classifications that apply to each substance;
- demonstrates that thresholds for groups or individual hazardous substances are not exceeded; and
- demonstrates the formaldehyde emission levels are met.

Compliance with the requirements in a) may be demonstrated by providing data indicating that the surface treatment does not have any of the classifications (or combinations thereof) listed in Table 3 (Appendix B) for ecotoxins.

For a), the following efficiency figures are to be used:

- Spray coating without recycling 50%
- Spray coating with recycling 70%
- Spray coating, electrostatic 65%

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–	Spraying, bell/disc	80%
–	Roller coating	95%
–	Curtain coating	95%
–	Vacuum coating	95%
–	Dipping	95%
–	Rinsing	95%

For example for spray coating without recycling, the organic solvent content limit will be $7/100 \times 50\% = 3.5\%$.

Test methods

Compliance with c) shall be demonstrated by providing test reports from a competent laboratory using the relevant test method below:

- AS/NZS 4266.16 Reconstituted wood-based panels – Methods of test –Formaldehyde emission – Desiccator method
- AS/NZS 2098.11 Determination of formaldehyde emission from plywood
- AS/NZS 4357.4 Structural laminated veneer lumber- Part 4 Determination of formaldehyde emissions

5.3.5 Preservative treatments

Criteria

- Plywood and wooden floor panels may only be treated with preservatives in accordance with the requirements of the New Zealand Building Code and to the minimum acceptable level in New Zealand Standard NZS 3602 “Timber and wood based products for use in building”, based on its intended use.
- Other products (or uses of plywood and wood) not included in NZS 3602 must not be treated with preservatives (e.g. fungicides, insecticides, fire protection agents).

NOTE: NZS 3602 only requires treatment of plywood for some indoor uses. There are no minimum treatment requirements for indoor use of other engineered wood products.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by a completed table 3 in appendix A identifying any treatment processes or chemicals that are used.

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5.3.6 Hazardous substances used in engineered wood, cork or bamboo

Criteria

- a Engineered wood products must not contain substances exceeding 0.5 g/Kg that are classified toxic or allergenic by inhalation. Wood and cork dust (which is physically and chemically bound in the product) is exempt from this requirement.
- b Engineered wood products must not contain substances exceeding 0.5 g/Kg panel that are classified as ecotoxic.
- c Where wood, bamboo or cork-based materials (excluding raw timber) comprise more than 5 % by weight of the floor covering, the formaldehyde emissions from the wood, bamboo or cork-based components shall not exceed the following limits:
 - 1.5 mg/l for raw particleboard
 - 1.0 mg/l for other engineered wood materials(these limits applied as per AS/NZS 1859, ie 95 percentile compliance, Desiccator method).

NOTE: These limits are met by E1 particleboard and MDF or other engineered wood material as defined by AS/NZS 1859.
- d Licence holders must:
 - i Document, implement and report on a programme to monitor resin and manufacturing technology;
 - ii Develop, maintain, implement and report on an improvement programme to produce lower formaldehyde emission products;
 - iii Record performance of manufacturing processes (including achieved product emission levels and product reject rates).

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by a completed table 3 in appendix A identifying all hazardous substances and products included in each wood panel product used in the floor covering (including CAS No, where available); and documentation that:

- includes Material Safety Data Sheets for hazardous substances;
- identifies the classifications that apply to each substance;
- demonstrates that thresholds for groups or individual hazardous substances are not exceeded in each flooring product;
- includes test reports for formaldehyde; and
- includes documentation for the implemented formaldehyde emission programmes.

Compliance with the requirements in a) and b) may be demonstrated by providing data indicating that the substance does not have any of the classifications (or combinations thereof) listed in Table 3 (Appendix B) for toxins, ecotoxins and sensitisers.

Compliance with c) shall be demonstrated by providing test reports from a competent laboratory using the relevant test method below:

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- AS/NZS 4266.16 Reconstituted wood-based panels – Methods of test – Formaldehyde emission – Desiccator method
- AS/NZS 2098.11 Determination of formaldehyde emission from plywood
- AS/NZS 4357.4 Structural laminated veneer lumber- Part 4 Determination of formaldehyde emissions.

5.4 Emissions to air

Criteria

The finished flooring shall have emissions to air that meet either:

- the GuT requirements;
- the AgBB requirements;
- the Greenguard requirements;
- the Resilient Floor Covering Institute’s (RFCI) Floorscore programme; or
- the Carpet and Rug Institute’s (CRI) Green Label Plus programme.

NOTE: For flooring products where the only source of VOC/formaldehyde emissions is through engineered wood and/or surface coatings the products must meet criteria 5.3.4 Surface coatings and/or 5.3.6 Hazardous Substances used in Engineered Wood, Cork or Bamboo Products. No finished product testing will be required

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be accompanied by documentation (as relevant) either:

- for compliance with the GuT requirements – a test report (for testing using the methods specified by GuT) and calculations demonstrating the GuT limits (applicable at the time of application) are met for the flooring
- for compliance with the AgBB requirements – a test report (for testing using the methods specified by AgBB) and calculations demonstrating the AgBB limits (applicable at the time of application) are met for the flooring
- for compliance with Greenguard - either a current certificate of compliance covering the flooring, issued by Grennguard, or a test report (for testing using the methods specified by GreenGuard) demonstrating the limits set by GreenGuard (at the time of application) are met for the flooring;
- for compliance with RFCI FloorScore - either a current certificate of compliance covering the flooring, issued by the SCS (Scientific certification systems), or a test report (for testing using the methods specified by SCS) demonstrating the limits set by the RFCI FloorScore (at the time of application) are met for the flooring;
- for compliance with CRI Green Label Plus - either a current certificate of compliance covering the flooring, issued by the CRI, or a test report (for testing using the methods specified by CRI) demonstrating the limits set by the CRI Green Label Plus (at the time of application) are met for the flooring.

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Explanatory notes

- Information on the GuT testing methods and limits is available at http://www.gut-ev.de/en/emission_test.htm
- Information on the AgBB Testing methods can be found at <http://www.umweltbundesamt.de/produkte-e/bauprodukte/agbb.htm>
- Information on the Greenguard requirements can be found at http://www.greenguard.org/en/technicalCenter/tech_testMethods.aspx
- Information on the the Resilient Floor Covering Institute's FloorScore programme requirements can be found at <http://www.scscertified.com/gbc/floorscore.php> .
- Information on the CRI Green Label Plus programme is available at www.carpet-rug.com/commercial-customers/green-building-and-the-environment/green-label-plus and for the current limits at http://www.carpet-rug.org/pdf_word_docs/071028_Carpet_GLP_Criteria.pdf

5.5 Energy management

Criteria

- a The licence applicant/holder and product manufacturer must have effective energy management policies and procedures and/or an energy management programme.
NOTE: if the manufacturers are ECNZ licence holders, they are deemed to comply.
- b The licence holder and manufacturer must report annually to ECNZ on energy management, including:
 - total energy use
 - breakdown of total energy use to types of energy used
 - energy use related to production
 - initiatives taken to reduce energy use and improve energy efficiency
 - initiatives taken to calculate and reduce CO2 emissions associated with energy use
 - initiatives or requirements for suppliers or contract manufacturers.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be accompanied by documentation that:

- describes the energy management policies, procedures and programmes
- includes annual reports on energy use and management.

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5.6 Waste management

Criteria

- a The licence applicant/holder and product manufacturer must have effective waste management policies and procedures and/or a waste management programme covering manufacturing operations.
- NOTE:** if the manufacturers are ECNZ licence holders, they are deemed to comply.
- b Licence holders and product manufacturers must report annually to ECNZ on waste management, including:
- quantities and types of waste recovered for reuse internally and externally
 - quantities and types of waste recycled internally and externally
 - quantities and types of waste disposed of to landfill
 - quantities and types of waste burned internally for energy recovery
 - waste generation related to production
 - initiatives taken to reduce waste generation and improve recovery/recycling of waste
 - initiatives or requirements for suppliers or contract manufacturers.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be accompanied by documentation that:

- describes waste minimisation processes and procedures implemented by the manufacturer
- describes how the floor covering can be reused, reprocessed and disposed and demonstrating that this can be safely achieved in the markets in which it is sold, used and will be disposed.
- describes the waste management policies, procedures and programmes; and
- includes annual reports to ECNZ on waste generation and management.

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5.7 Packaging requirements

Criteria

- a All plastic packaging must be made of plastics that are able to be recycled in New Zealand (or the country to which the product is exported and sold).
- b Packaging shall not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent recycling (i.e. sleeves, metallic labels).
- c Information shall be provided to ECNZ at application and thereafter reported annually on PVC and/or phthalates used in the packaging. This should include information from production records and/or suppliers on:
 - i the percentages by weight of recycled and virgin PVC
 - ii the particular production processes (membrane cells, non-asbestos diaphragms, modified diaphragms, graphite anodes, mercury cells, closed-lid production etc) used to produce chlorine and VCM for the PVC being used in the packaging for ECNZ-licensed products (including the locations of the production)
 - iii information, where available, on waste disposal, wastewater treatment and emissions to air (occupational exposure, emissions from the factory and emissions from the final PVC resin)
 - iv information on any Environmental Management System (EMS) for the production process, including requirements for waste, water, air and product-related requirements
 - v the types of stabilisers used
 - vi the types and amounts of any phthalate plasticisers present in recycled content of the PVC (if that information is available) and/or added when manufacturing PVC
 - vii research and initiatives implemented on substitutes for phthalates identified as of concern by regulators
 - viii any product stewardship arrangements for the packaging.

NOTE: Regulators have identified the following phthalates to be of concern – dibutyl phthalate (DBP), diisobutyl phthalate (DIBP), butyl benzyl phthalate (BBP), di-n-pentyl phthalate (DnPP), di(2-ethylhexyl) phthalate (DEHP), di-n-octyl phthalate (DnOP), diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP). These phthalates may be prohibited by the Hazardous Substances criteria in Clause 5.10.1.
- d Cardboard packaging shall consist of any combination of:
 - Packaging approved under EC-10
OR
 - recycled content.
AND/OR
 - waste wood or virgin fibre from native forests provided the forests are certified under the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC) as sustainably managed (or equivalent certification)
AND/OR
 - waste wood or virgin fibre from plantations (including from farm forests or wood lots), provided the plantations are legally harvested..

NOTE: Please see Appendix D for details of acceptable certifications for certified sustainable forest management and legally harvested wood.

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Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported with the following documentation and evidence.

- Conformance with criterion (a) shall be supported by documentation verifying the packaging is recyclable.
- Conformance with criteria (b) shall be demonstrated by providing samples of all plastic containers and components.
- Conformance with criteria (c) shall be demonstrated by providing initial and ongoing annual reports to ECNZ on PVC and plasticisers used. This should include as much of the available information requested in (c) as possible.
- Conformance with criteria (d) shall be supported by documentation from the packaging manufacturer verifying the recycled content of the cardboard packaging and documentation from the packaging manufacturer verifying the source of all fibre in the cardboard packaging.

5.8 Consumer information

Criteria

The floor covering product must be accompanied by the following information for product suppliers, installers and consumers:

- i the recommended base or underlay for the floor covering
- ii the recommended upper limit on the relative moisture in the underlying material and the recommended laying temperature
- iii the recommended adhesive to glue flooring parts together and to glue the floor to the underlying surface
- iv if floor parts need to be connected by means of welding, the recommended method must be specified
- v the recommended cleaning and maintenance agents/methods
- vi in the case of oiled and untreated wooden flooring, a description of the treatment required (type/quality oil or varnish) to achieve the intended abrasion resistance
- vii the appropriate type of area to use the product (specified in accordance with the classes outlined in Section 6 or EN 685)
- viii how the duration of the floor can be prolonged by renovation e.g. by means of sanding and surface treatment.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer of the applicant company. This statement shall be accompanied by copies of the relevant information and an explanation of how the information is available to suppliers, installer and consumers.

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5.9 Product stewardship

Criteria

Licence holders must report annually to Environmental Choice New Zealand on product stewardship, including:

- i availability, feasibility, and involvement in product takeback schemes, including for products which are currently installed;
- ii initiatives taken to promote or implement takeback schemes;
- iii initiatives taken to make products more recyclable; and
- iv initiatives or requirements for suppliers or contract manufacturers

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be accompanied by documentation that:

- includes information which demonstrates that the product can be recycled.
- describes the product stewardship initiatives, procedures and programmes; and
- includes annual reports on product stewardship initiatives.

6 Product characteristics

6.1 Fitness for purpose

Criteria

The product shall be fit for its intended use and conform, as appropriate, to relevant product performance standards, including those for durability outlined below.

- a Factory varnished wooden floorings and parquet floorings that may be revarnished must achieve the following standards for the number of revolutions counted before varnish is worn through (measured in accordance with NS 3506/SS923509):
 - Class 1: ≥ 750 revolutions
 - Class 2: $\geq 1,500$ revolutions
 - Class 3: $\geq 3,000$ revolutions
 - Class 4: $\geq 5,000$ revolutions
- b Laminate floor coverings must as a minimum be classified as Class 2 (General)². Wearing through of the abrasion surface shall be measured in accordance with EN 13329. The area of use of the floor must be classified in accordance with the standard.

² Classes of area use for flooring:

Classes of use, private use (EN 685):

- Class 21: Moderate use (e.g. bedrooms)
- Class 22: Medium use (Other rooms in a dwelling, living room, hall)
- Class 23: Intense use (e.g. other rooms, living room, hall).

Classes of use, professional/public use (EN 685):

- Class 31: Moderate use (e.g. small offices, hotel bedrooms, conference rooms)

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- c Plastic and linoleum floor coverings must as a minimum be classified as Class 22 (Medium) . If the floor has a combination of transparent and patterned or pigmented abrasion layers, this will be counted as a single abrasion layer.
- d Floor coverings made from other materials must be tested to demonstrate appropriate durability, based on the intended area of use.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer of the applicant company. This statement shall be supported by documentation:

- identifying the applicable standards and or consumer/customer requirements; and
- demonstrating how compliance is monitored and maintained.

Test methods

ASTM D 4060-90 or prEN 175.333.08 may be used and adapted (as alternatives to NS 3506/SS923509), to demonstrate compliance with (b).

The test methods to demonstrate durability as required by (d) must be selected on the basis of the intended area of use of the flooring.

-
- Class 32: Normal/medium human traffic (e.g. classrooms, hotels and the like)
 - Class 33: Heavy human traffic (e.g. schools, corridors, shops etc.)
 - Class 34: Intense human traffic (e.g. airports, shopping centres, vestibules).

Classes of area use, light industry (EN 685):

- Class 41: Moderate use (e.g. electronics businesses, precision engineering).
- Class 42: Normal/general use (e.g. storeroom, electrical businesses)
- Class 43: Heavy wear (e.g. storage areas, other production facilities)

Classes of use for hard flooring:

Classes of use:

- Class 1: Bedrooms (private)
- Class 2: Other rooms in a dwelling (private)
- Class 3: Offices, classrooms, cinema auditoria, restaurants, etc.(light projects)
- Class 4: Vestibules, corridors, shops etc. (heavier projects)

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7 Requirements and notes for Licence Holders

Monitoring compliance

Prior to granting a licence, The Trust will prepare a plan for monitoring ongoing compliance with these requirements. This plan will reflect the number and type of products covered by the licence and the level of sampling appropriate to provide confidence in ongoing compliance with criteria. This plan will be discussed with the licence applicant and when agreed will be a condition of the licence.

As part of the plan, The Trust will require access to relevant quality control and production records and the right of access to production facilities. Relevant records may include formal quality management or environmental management system documentation (for example, ISO 9001 or ISO 14001 or similar).

The monitoring plan will require the licence holder to advise The Trust immediately of any non-compliance with any requirements of this specification which may occur during the term of the licence. If a non-compliance occurs, the licence may be suspended or terminated as stipulated in the Licence Conditions. The licensee may appeal any such suspension.

The Trust will maintain the confidentiality of identified confidential information provided and accessed during verification and monitoring of licences.

Using the ECNZ Label

The Label may appear on the wholesale and retail packaging for the product, provided that the product meets the requirements in this specification and in the Licence Conditions.

Wherever it appears, the Label must be accompanied by the words Floor Coverings and by the Licence Number eg 'licence No1234'.

The Label must be reproduced in accordance with the Environmental Choice programmes keyline art for reproduction of the Label and the Licence Conditions.

Any advertising must conform to the relevant requirements in this specification, in the Licence Conditions and in the keyline art.

Failure to meet these requirements for using the Environmental Choice Label and advertising could result in the Licence being withdrawn.

Appendix A: Table 1- Product description table

- Complete one table for each similar product type; use a second page for a single product if necessary. Use % ranges where appropriate, e.g. Wood: 55% -65%.

		Product description including name/number:									
Material Component Description	Weight	Component material as a % of finished product weight									Supplier to the licence applicant /holder
		Solid Wood %	Engineered wood %	Bamboo %	Cork %	PVC %	Non PVC polymer and plastics %	Linoleum %	Rubber %	Surface treatment %	
Total % by material type:											Total %:

- Example Table 1- Product Description Wood veneer flooring

		Product description including name/number:									
Material Component Description	Weight	Component material as a % of finished product weight									Supplier to the licence applicant /holder
		Solid Wood %	Engineered wood %	Bamboo %	Cork %	PVC %	Non PVC polymer and plastics %	Linoleum %	Rubber %	Surface treatment %	
Wood veneer	5g	5									Supplier A
Composite panel	65g		65								Supplier B
Plastic clipping system (PVC)	5g					5					Supplier C
Rubber underlay	20g								20		Supplier D
Xy Surface treatment	5g									5	Supplier E
Total % by material type:		5	65			5			20	5	Total %:100

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Appendix A: Table 2- Component/Process Supplier Information

- Include each component and subcontracted processing operation

Supplier name	Supplier address and contact details (include all manufacturing locations)	Component or process supplied

Example Table 2- Component/Process Supplier Information

Supplier name	Supplier address and contact details (include all manufacturing locations)	Component or process supplied
Supplier A	Address A: US	Wood veneer
Supplier B	Address B: NZ	Panel Composite base board
Supplier C	Address C: NZ	Plastic extrusions for clip
Supplier D	Address C: Malaysia	Rubber for backing
Supplier E	Address C: NZ	Surface Coating

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Appendix A: Table 3- Substances and Hazardous Materials Description Table

- Complete one table for each flooring product

Process/ Type of Chemical	ECNZ Clause	Trade Name	Chemical Name	Supplier and or Licence Applicant/ Holder Code (if applicable)	CAS Number	SDS		HSNO/Risk phrases	ODP/ GWP	% added by weight
						Issue date	Copy attached (✓)			
Stabilisers, plasticisers.	5.2.5									
	5.2.6									
	5.2.7									
Manufacturing Adhesives	5.3.3									
Surface Treatments	5.3.4									
Preservative Treatments	5.3.5									
Resins	5.3.6									
Dyes	5.3.2									

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Process/ Type of Chemical	ECNZ Clause	Trade Name	Chemical Name	Supplier and or Licence Applicant/ Holder Code (if applicable)	CAS Number	SDS		HSNO/Risk phrases	ODP/ GWP	% added by weight
						Issue date	Copy attached (✓)			
Flame Retardants	5.3.2									
Blowing agents	5.3.2									
Other Chemicals and additives used in the production of the flooring product.	5.3.1 and 5.3.2									

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Appendix B Hazardous Substance Classifications

• **Table 4 – Hazardous Substance Classifications**

European Risk Phrases	New Zealand HSNO Classes	Globally Harmonised System
Toxins		
R23 toxic by inhalation	6.1B or 6.1C	Acute Tox. 2 and 3, H330, H331
R24 toxic in contact with skin	6.1B	Acute Tox. 3, H311
R25 toxic if swallowed	6.1B	Acute Tox. 3, H301
R26 very toxic by inhalation	6.1A	Acute Tox. 2 and 3, H330
R27 very toxic in contact with skin	6.1A	Acute Tox. 1, H310
R28 very toxic if swallowed	6.1A	Acute Tox. 2, H300
Ecotoxins		
R50 very toxic to aquatic organisms	9.1A	Aquatic Acute 1, H400
R51 toxic to aquatic organisms	9.1D or 9.1B	
R52 harmful to aquatic organisms	9.1D or 9.1C	
R53 may cause long-term adverse effects in the aquatic environment	9.1D	Aquatic Acute 4, H413
R50/53 very toxic to aquatic life with long lasting effects	9.1A	H410
R51/53 toxic to aquatic life with long lasting effects	9.1B	H411
R52/53 toxic to aquatic life with long lasting effects	9.1C	H412
Respiratory Sensitisers		
R42 May cause sensitisation by inhalation	6.5A	Resp. Sens. 1, H334
Contact Sensitizers		
R38 Irritating to skin	6.3A or 6.3B	Skin Irrit. 2, H315
R43 May cause sensitisation by skin contact	6.5B	Skin Sens. 1, H317
Carcinogens, Mutagens and Reproductive Toxins		
R40 limited evidence of a carcinogenic effect	6.7B	Carc. 2, H351
R45 may cause cancer	6.7A	Carc. 1A and 1B, H350
R46 may cause heritable genetic damage	6.6A	Muta. 1B, H340
R49 may cause cancer by inhalation	6.7A	Carc. 1A and 1B, H350
R60 may impair fertility	6.8A	Repr. 1A and 1B, H360
R61 may cause harm to the unborn child	6.8A	Repr. 1A and 1B, H360
R62 possible risk of impaired fertility	6.8B	Repr 2, H361
R63 possible risk of harm to the unborn child	6.8B	Repr 2, H361d
R68 possible risk of irreversible effects	6.6B	Muta. 2, H341

NOTE: There are different classification systems for hazardous substances that are used internationally. As the ECNZ specifications need to consider products that are manufactured in New Zealand and overseas, it is necessary to consider the equivalence of hazardous property classification systems in different jurisdictions. The table above shows the (broadly) equivalent European Risk Phrases, New Zealand HSNO Classifications and the United Nations' Globally Harmonised System of Classification and Labelling of Chemicals (GHS) classifications. The EU has implemented the GHS into EU law, replacing the Risk Phrases, and all "substances" (single compounds) have now been transferred to the new classification system. Mixtures must be classified under the GHS by 31 May 2015.

It is important to note that the Risk Phrases, HSNO Classifications and GHS are classification frameworks and the particular classifications applied to a substance may vary between jurisdictions (for example Europe, the United States and New Zealand each have their own agency with responsibility for assessing and classifying hazardous substances). Differences between classifications can be due to the weight placed on particular toxicity studies (i.e. a jurisdiction may consider that a study is flawed) or in the event that new information becomes available (i.e. differences in the timing of the classification or re-classification of a substance). Where there is a discrepancy between the classifications applied to specific substances in the different schemes, The Trust's appointed technical advisors will review supporting information regarding the classifications on a case-by-case basis to determine and recommend to The Trust how these discrepancies should be managed within the life cycle context of the relevant product category. Where appropriate, technical clarifications and changes, with accompanying explanation, will be included in the relevant specification.

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Appendix C

Physical and Environmental Properties of Major Blowing Agents

• Physical and Environmental Properties of Major Blowing Agents

Ref: UNEP (2007): 2006 Report of the Flexible and Rigid Foams Technical Options Committee – 2006 Assessment. Nairobi: UNEP/Ozone-Secretariat. Available online: http://ozone.unep.org/teap/Reports/FTOC/ftoc_assessment_report06.pdf [Accessed May 2010]

	CFC-11	CFC-12	HCFC-22	HCFC-142b	HCFC-141b	HFC-134a	HFC-152a	HFC-245fa	HFC-365mfc	HFC-227ea
Chemical Formula	CFCl ₃	CCl ₂ F ₂	CHClF ₂	CH ₃ CClF ₂	CCl ₂ FCH ₃	CH ₂ FCF ₃	CHF ₂ CH ₃	CF ₃ CH ₂ CHF ₂	CF ₃ CH ₂ CF ₂ CH ₃	CF ₃ CHFCF ₃
Molecular Weight	137	121	86	100	117	102	66	134	148	170
Boiling Point (°C)	24	-30	-41	-10	32	-27	-25	15.3	10.2	-16.5
Gas Conductivity (mW/m ² K at 10 °C)	7.4	10.5	9.9	8.4	8.8	12.4	14.3"	12.5*	10.6*	11.6
Flammable limits in air (vol. %)	none	none	none	6.7-14.9	7.3-16.0	none	3.9-16.9	none	3.8-13.3	none
TVL or OEL (ppm) (USA)	1000	1000	1000	1000	500	1000	1000	n/a	n/a	1000
GWP (100 yr.)**	4000	8500	1700	2000	630	1300	140	820	840	2900
ODP	1.0	1.0	0.055	0.065	0.11	0	0	0	0	0

Table 5: Fluorinated Blowing Agents

	Methylene Chloride	Trans-1,2-dichloroethylene	Isopentane	Cyclopentane	n-pentane	Carbon Dioxide	Isobutane	n-butane	Methyl Formate (Ecomate®)
Chemical Formula	CH ₂ Cl ₂	C ₂ H ₂ Cl ₂	CH ₃ CH(CH ₃)CH ₂ CH ₃	(CH ₂) ₅	CH ₃ (CH ₂) ₃ CH ₃	CO ₂	C ₄ H ₁₀	C ₄ H ₁₀	CH ₃ (HCOO)
Molecular Weight	84.9	97	72.1	70.1	72.1	44	58.1	58.1	60
Boiling Point (°C)	40	48	28	49.3	36	-139	-11.7	0.5	31.5
Gas Conductivity (mW/m ² K at 10 °C)	n/a	n/a	13.0	11.0	14.0	14.5	15.9	13.6** *	10.7"
Flammable limits in air (vol. %)	none	6.7-18	1.4-7.6	1.4-8.0	1.4-8.0	none	1.8-8.4	1.8-8.5	5.0-23.0
TVL or OEL (ppm) (USA)	35-100	200	1000	600	610	n/a	800	800	100
GWP (100 yr.)**	n/a	<25	<25	<25	<25	1	<25	<25	<25
ODP	0	0	0	0	0	0	0	0	0

Table 6: Non-fluorinated Blowing Agents

" Measured at 25 °C

* Measured at 24 °C

** IPCC-Report 1996

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*** Measured at 0 °C

Appendix D Explanatory notes for types of claims that can be used to demonstrate compliance with the criteria set in 5.7 d).

Part A:

Sustainable Forest Management (SFM):

The FSC and PEFC certification schemes each have a range of certificates/labels. Some of these allow for wood/fibre from certified sustainably managed plantations or forests to be mixed with non-certified wood/fibre. Under FSC Mixed Credit or PEFC Volume Credit methods, wood/fibre or products associated with the certification claim or label may or may not actually contain wood/fibre from the certified sustainably managed source. Certifications accepted by The Trust are those which will ensure that wood from sustainably managed forests, as required in criteria 5.2.1 and 5.2.2, will be actually present in the final ECNZ-licensed product. These are set out below.

Types of FSC claims which can be used to demonstrate compliance with the above requirements:

- FSC 100 %
- FSC Mix X % - provided the % meets the requirements
- FSC Mix Credit – only if the manufacturer can demonstrate that actual FSC material is used for the ECNZ products.
- FSC Recycled provided it contains 100% recycled material
- FSC Controlled Wood cannot be used to meet the FSC certified requirements

Types of PEFC claims which can be used to demonstrate compliance with the above requirements:

- PEFC Certified – Physical Separation method.
- X % PEFC Certified – Average Percentage method, provided the % meets the requirements
- X % PEFC Certified – Volume Credit method – only if the manufacturer can demonstrate that actual PEFC certified material is used for the ECNZ products.

PEFC Controlled Sources material cannot be used to meet the PEFC certified requirements

The following certification schemes will be accepted as equivalent to FSC or PEFC certification of SFM:

- Pengelolaan Hutan Produksi Lestari – Sustainable Production Forest Management certified (PHPL) (<http://liu.dephut.go.id/>).
- Sustainable Forest Management Plans, supported with Annual Logging Plans that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993). These

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Plans must be prepared in accordance with Standards and Guidelines for the Sustainable Management of Indigenous Forests and guidance for preparing Sustainable Management Plans and Annual Logging Plans. Wood sourced from New Zealand indigenous forests covered by approved plans will be accepted as equivalent to FSC sustainably managed forest certification provided compliance with the approved plans is demonstrated through independent on-site assessment.

For any other schemes to be considered, the applicant will be required to provide detailed information that demonstrates the certification scheme is credible and equivalent. For examples of the type of information required, refer to the UK Central Point of Expertise on Timber Procurement (CPET) assessments of certification schemes available on www.CPET.org.uk.

Part B:

Legal harvesting:

The following certification schemes will be accepted as sources of information to demonstrate legal harvesting, where certificates and chain of custody evidence is available for virgin fibre sources:

- Forest Stewardship Council – “Certified” or “Controlled Wood” (www.fsc.org).
- Programme for the Endorsement of Forest Certification (PEFC) - “Certified” or “Controlled Sources” (www.pefc.org).
- SGS Timber Legality & Traceability Verifications service (TLTV) Verification of Legal Compliance certification (TVTL-VLC) (<http://www.sgs.com/en/Public-Sector/Monitoring-Services/Timber-Traceability-and-Legality.aspx>).
- Rainforest Alliance SmartWood Verification of Legal Compliance (VLC) certification (<http://www.rainforest-alliance.org/forestry/verification/legal>).
- System Verifikasi Legalitas Kayu - Timber Legality Verification System (SVLK) certified, or SVLK/PHPL (Pengelolaan Hutan Produksi Lestari – Sustainable Production Forest Management) certified (<http://liu.dephut.go.id/>).
- Sustainable Forest Management Plans (supported with Annual Logging Plans) that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993).

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