



The New Zealand Ecolabelling Trust

Licence Criteria for Recycled Rubber Products

EC-18-17

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Specification change history

Minor clarifications, corrections or technical changes made since the specification was last reviewed and issued in September 2017.

<u>Date</u>	<u>Version</u>	<u>Change</u>

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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.

This specification sets out the requirements that recycled rubber products must meet in order to be licensed to use the ECNZ Label. The requirements include environmental criteria and product characteristics. 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 has been prepared based on an overview life cycle assessment, specifications for similar products from other GEN labelling programmes, relevant information from other ECNZ specifications, publicly available information, and information provided by current licensees. Once finalised, this specification will be 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 Ministry for Environment (MfE) estimates five million tyres are discarded annually in New Zealand¹. Globally, the number is estimated to be in excess of 2 billion, with less than 20% recycled. MfE estimates that currently about a third of waste tyres are diverted from disposal, with about half of the diverted tyres processed in New Zealand². This specification for Recycled Rubber Products identifies criteria that differentiate environmentally preferable products manufactured from recycled rubber.

Tyre Track, a voluntary programme funded by MfE and the Motor Trade Association from 2004 to 2009, tracked about 30% of tyres. Data collected under the programme indicated about 75% of used tyres in New Zealand are disposed of in landfills, and about 10-15% are either used as silage cover, in playgrounds, retaining walls or other uses³. Tyrewise, an industry group funded by MfE's Waste Minimisation Fund, recommended in 2015 that the Minister for the Environment designate waste tyres as a priority product under the Waste Minimisation Act (2008), which would trigger a mandatory product stewardship scheme.^{2,4} While this has not happened, the Waste Minimisation Fund's October 2015 funding focused on end-of-life tyres⁵.

There are potentially significant adverse environmental impacts of landfilling of tyres⁶. The European Union has banned landfilling of whole tyres since 2003, and shredded tyres since 2006. Whole tyres resist compaction, taking up a disproportionate amount of valuable landfill space. Stockpiles of tyres can be a breeding ground for vermin, a source of contaminated leachate, and a considerable fire hazard unless properly managed. Tyre fires can have major environmental impacts, including effects on air, water, and soil quality. Combustion of tyres results in emissions to air of particulates, carbon monoxide, sulphur oxides, oxides of nitrogen, volatile organic compounds, polycyclic aromatic hydrocarbons, dioxins, furans, hydrogen chloride, benzene, polychlorinated biphenyls, and metals such as arsenic, cadmium, nickel, zinc, mercury, chromium, and vanadium⁷. Melted rubber can generate "pyrolitic oil", and elevated concentrations of metals in ash residue from combustion can contaminate surface and ground water⁸. A number of significant and recent fires have occurred in New Zealand in areas used for tyre stockpiling⁹.

Internationally, used tyres are frequently used as tyre derived fuel (TDF), supplementing the solid fuel in cement kilns, electric arc furnaces, and coal fired boilers. Tyres contain more than 90% organic materials, with a heat value of around 33 MJ/kg¹⁰. New Zealand has only one kiln operation (Golden Bay Cement, Whangarei) that can use TDF. In June 2017, MfE announced proposed measures to encourage use of used tyres as TDF, including a series of grants (to enable the Golden Bay kiln to use TDF, to establish a nationwide collection service, and to establish shredding services in Auckland and Christchurch), and a proposed National Environmental Standard that would require resource consent for large outdoor stockpiles of used tyres¹¹.

¹ MfE. 2017. www.mfe.govt.nz accessed August 2017.

² MfE. 2014. *Priority Waste Streams for Product Stewardship Intervention: a Discussion Document*.

³ MfE. 2006. *Product Stewardship Case Study for End-of-Life Tyres*. (Prepared under contract by URS)

⁴ <http://3r.co.nz/what-we-do/tyrewise/>

⁵ <http://www.mfe.govt.nz/more/funding/waste-minimisation-fund/how-apply-waste-minimisation-fund>

⁶ MfE. 2004. *Management of End-of-Life Tyres*. (Prepared under contract by Firecone)

⁷ USEPA. 1997. *Air Emissions from Scrap Tire Combustion* (EPA-600/R-97-115)

⁸ Massachusetts Department of Environmental Protection. 2006. *Safe Handling of Waste Tires*.

⁹ MfE. 2014. *Priority Waste Streams for Product Stewardship Intervention: a Discussion Document*.

¹⁰ Paul J. *Rubber* in Kirk-Othmer Encyclopaedia of Chemical Technology.

¹¹ MfE. 2017. *A Proposed National Environmental Standard for the Outdoor Storage of Tyres: Consultation Document*.

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In the United States, a significant number of scrap tires are used in civil engineering applications¹². However, tyre recycling has also created a market nationally and internationally for consumer products that are made from shredded tyres, processed rubber crumb, and rubber/plastic compounding. Life cycle analyses comparing options for end-of-use tyres conclude that in a European setting (where landfilling is banned)¹³ and for tyres in the United States¹⁴, recycling into construction materials (i.e., ambient temperature processing such as shredding for use in asphalt or as a filler in artificial turf) has a larger environmental benefit than co-incineration in a cement kiln (high temperature recycling processes were not assessed).

Approximately three-quarters of tyres in New Zealand are imported³. Bridgestone operate New Zealand's only tyre manufacturing plant (Papanui, Christchurch), and three retread factories producing commercial retreads for the New Zealand market. A life cycle analysis of car tyres indicates that the greatest consumption of water and generation of wastewater during the tyre life cycle occurs during raw materials acquisition and tyre use¹⁵. Products made from recycled rubber extend the use of a material that has had significant raw material input, and promoting manufacture of recycled rubber products could drive demand for reuse of this raw material. There are currently limited recycling facilities in New Zealand for end-of-life tyres. Pacific Rubber's crumb rubber plant in Onehunga ceased operating in 2014¹⁶. One New Zealand operator produces chip rubber from end-of-life tyres which is used in applications including horse arenas for dressage, animal pens, and filler for sports equipment (J&J Laughton Shredding Services Ltd), and is developing capacity on site for energy recovery from end-of-life tyres¹⁶. Research commissioned by MfE concluded that the relatively small size of the New Zealand market, and resulting high cost of investment, has resulted in under-investment in waste tyre recycling¹⁷.

The manufacturing processes used in recycling rubber and producing new products typically involve:

- physical processing to create crumb, commonly grinding or shredding;
- separating out steel, wire, or textile fibre reinforcement using magnets and screens;
- addition of chemicals, such as adhesives/binders, fillers, softeners, and pigments;
- pressurized heating (digestion); and
- moulding and curing to produce the new products.

Binders (adhesives), such as latex, polyurethane prepolymers reacted with diisocyanates, are added to aid digestion of the crumb. Up to 20% of binder may be required to produce recycled rubber products from crumb¹⁸. Compounding ingredients (fillers) such as carbon black, are used to stiffen or strengthen the rubber. Softeners and surfactants may be added to improve the workability of the material. These may include petroleum products (oils, tars, waxes), resins, and fatty acids. Pigments may include zinc oxide, various organic dyes, and metal-based pigments. Small amounts of chemical plasticisers or peptizers may be added to lower the viscosity of the uncured product¹⁹. Depending on

¹² Humphrey D.N. 2004. *Civil Engineering Applications of Scrap Tires*. Presentation to the Heartland Scrap Tire Management Conference

¹³ Genan Business & Development A/S. 2009. *Comparative life cycle assessment of two options for waste tyre treatment: material recycling vs. co-incineration in cement kilns*.

¹⁴ Feraldi R, S Cashman, M Huff, L Raahauge. 2012. *Int J Life Cycle Assess. Comparative LCA of treatment options for US scrap tires: material recycling and tire-derived fuel consumption*.

¹⁵ Continental AG. 1999. *Life Cycle Assessment of a Car Tire*.

¹⁶ J Laughton, 2016, personal communication

¹⁷ MfE. 2015. *Waste Tyres Economic Research – Report 3*. (Prepared under contract by KPMG)

¹⁸ Sartomer. *Polyurethane Binders for the Production of Composite Materials*. sartomer.com/TechLit/4891.pdf

¹⁹ Barnhart, RR. *Rubber Compounding* in Kirk Othmer Encyclopaedia of Chemical Technology

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the product application, UV stabilisers or flame retardants are also sometimes used in formulation of recycled rubber products.

For some types of recycled rubber products, there is the potential for leaching of metals into water (for example, products used for drainage or in wet conditions)²⁰, or release of volatile or semi-volatile organic compounds when products are exposed to heat. However, these potential effects have been reported to be relatively low risk for products that do not involve additional chemical treatment²¹.

The main environmental aspects in the manufacturing and use stages of the life cycle of products made from recycled rubber are use of energy and potential use of chemicals. If chemicals are used this may prevent further recycling of products and it may cause problems when products are used.

Packaging for recycled rubber products is a potentially significant use of resources. Measures to ensure packaging materials are able to be recycled and to encourage recycled content to be included in the packaging will help to reduce demand on raw materials and divert waste from landfills. Packaging also has environmental impacts, depending upon the type of packaging used and disposal options. Reducing, reusing and/or recycling packaging will conserve valuable resources and reduce the volume of packaging entering the waste stream.

Based on a review of currently available life cycle information, the following product category requirements are likely to produce environmental benefits by:

- reducing the amount of rubber entering the waste stream,
- conserving a valuable resource,
- reducing the use and subsequent release of environmentally harmful substances to the environment at all stages of the recycled rubber product's life cycle,
- reducing impacts from energy use in production processes, and
- encouraging recovery, reuse, recycling and responsible disposal of waste materials and packaging.

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

²⁰ Humphrey DN, and M Swett. 2006. *Literature Review of the Water Quality Effects of Tire Derived Aggregate and Rubber Modified Asphalt Pavement*. Prepared for USEPA Resource Conservation Challenge.

²¹ California Integrated Waste Management Board. 2007. *Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products* (prepared under contract by Office of Environmental Health Hazard Assessment).

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3 Interpretation

ASTM means American Society for Testing and Materials.

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.

EPA means the New Zealand Environmental Protection Agency

Formulated or manufactured with refers to the preparation of the recycled rubber product and not to the preparation of the components of the recycled rubber product unless the components are specifically mentioned in the product specific requirements.

GEN means the Global Ecolabelling Network.

HSNO means the New Zealand Hazardous Substances and New Organisms Act 1996.

Integral part means a necessary component which is intentionally included in the product.

ISO means International Organisation for Standardisation.

Label means the Environmental Choice New Zealand Label.

Raw material means a material used in the manufacture of recycled rubber products.

Recycled Rubber 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 such as rework, generated in a process and capable of being reclaimed within the same process that generated it.

Rubber means any of a number of natural or synthetic high polymers having unique properties of deformation (elongation or yield under stress) and elastic recovery after vulcanisation with sulphur or other cross-linking agents to change the polymer from thermoplastic to thermosetting.

Rubber Compound means a mixture that may consist of natural and synthetic rubber, filler/reinforcing agents such as carbon black and chemicals such as antioxidants.

Rubber Product means a product that consists of a minimum of 50% by weight of rubber compound.

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.

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.

Where references are made in this document to published lists, standards, or documents, the reference should be read as referring to the most recent edition of these lists, standards or documents.

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4 Category definition

This category includes all rubber products made from recycled rubber as further defined in the sub-categories in this section. The sub-categories include but are not limited to:

- 4.1 Agricultural and horticultural supplies (include garden hoses, soaker hoses and tubing)
- 4.2 Building and construction materials (include earthquake isolation pads and sound insulation pads)
- 4.3 Civil engineering products (include maintenance hole collars, bridge bearing pads, traffic management and road safety products)
- 4.4 Containers (include composting units and rubbish bins)
- 4.5 Marine products (include marine fenders and marine bumpers)
- 4.6 Automotive products (include bumpers, car mats, fanbelts, and vibration mounts)
- 4.7 Sporting goods (include sports mats and running tracks)
- 4.8 Tyres (include commercial and passenger vehicle tyres)
- 4.9 Household and office supplies (include mouse mats and household items)
- 4.10 Flooring and surface treatments (include mats, anti-static mats, playground surfacing)
- 4.11 Crumb rubber

To be licensed to use the Label, a recycled rubber product must comply with all the environmental criteria set out in clause 5 and product characteristics set out in clause 6.

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5 Environmental criteria

5.1 Legal requirements

Criteria

The product must comply with the provisions of all relevant environmental laws and regulations that are applicable during the product's life cycle.

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.

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 or raw materials within and between countries;
- using and disposing of the product; and
- relevant land use or discharge laws.

The documentation required may include, as appropriate:

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

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.

Within New Zealand, authorisation is required under the Hazardous Substances and New Organisms Act (HSNO) to import or to manufacture hazardous substances. Authorisation may involve a specific approval for a hazardous substance or approval under a Group Standard. The authorisation, Group Standards and regulations under HSNO set requirements for managing the hazardous substance (for example, storage, labelling and emergency preparedness). Information about requirements under HSNO is available from the Environment Protection Agency (EPA) and at <http://www.epa.govt.nz>. Regulatory requirements on hazardous substances may also apply under the Resource Management Act (RMA), in particular in regional and district plans prepared under the RMA, and in Council bylaws.

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5.2 Recycled content

Criteria

To be authorised to carry the Environmental Choice label, products made from recycled rubber must meet the criterion for minimum recycled content specific to their sub-category.

- 5.2.1 Recycled rubber products identified in sub-categories 4.1 through 4.3 and 4.10 must contain a minimum of 50% by weight recycled rubber.
- 5.2.2 Recycled rubber products identified in sub-categories 4.4 through 4.7 and 4.9 must contain a minimum of 75% by weight recycled rubber.
- 5.2.3 Recycled rubber products identified in sub-category 4.8 must contain a minimum of 5% by weight recycled rubber.
- 5.2.4 Recycled rubber products identified in sub-category 4.11 must contain 100% by weight recycled rubber.

Notes

For some specialised products, product performance standards set maximum recycled content requirements. Where this is the case, the maximum limit set in the relevant performance standard will apply as the minimum recycled content acceptable for award of an Environmental Choice licence. The criteria set above will not therefore apply.

Where a product contains components other than rubber (for example, plastic), the % requirement applies to the rubber component and the total weight of the rubber component only.

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer of the applicant company. This statement shall be accompanied by relevant quality control and production documentation.

5.3 Hazardous substances

Criteria

The following shall not be added to the granulated waste rubber;

- a Substances that are classified under the Hazardous Substances and New Organisms Act as:
 - 6.7A (known or presumed carcinogens)
 - 6.6 (mutagens); or
 - 6.8 (reproductive/ developmental toxins)
- b A combined total of more than 0.1% by weight of the recycled rubber product (rubber component) of substances that are classified under HSNO as 6.5 (respiratory and contact sensitisers) or 6.1 (acutely toxic);
- c Substances that are classed under the Hazardous Substances and New Organisms Act as 9.1A (aquatic ecotoxins) AND are not readily degradable or are potentially bioaccumulative, or substances classified as 9.1B. In this context, a substance is considered to be potentially

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bioaccumulative if the log Kow (log octanol/water partition coefficient) ≥ 3.0 (unless the experimentally determined BCF ≤ 100).

The requirements in (a) do not apply to trace levels (<0.1 % by weight) of substances reported in SDS to potentially be present as contaminants or impurities in raw materials or component substances.

The requirements in (b) do not apply to substances or materials which change their properties through processing and thus become no longer bioavailable (i.e., physically or chemically bound in the product), or undergo chemical modification in a way that removes the previously identified hazard. For substances that are used in accordance with this exemption, Licence holders will be asked at supervision assessments to comment on the development and availability of environmentally preferable alternatives.

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 relevant formulation and ingredient information, including:

- Formulation information sufficient to establish if the above % limits or specific ingredient requirements are met;
- Ingredient lists;
- Copies of the SDS, test reports (or other evidence) for all ingredients, which indicate that they meet the criteria listed in (a) to (c).

Additional documentation about quality control and production processes may also be required to demonstrate that compliance with the requirement is checked and consistently achieved.

5.4 Manufacturing process

Criteria

Solvents used to clean the production equipment must not contain halogenated hydrocarbons.

Verification

Conformance with these criteria shall be stated in writing and signed by the Chief Executive Officer of the applicant company. The statement shall be supported by relevant quality control and production documentation.

5.5 Waste management

- a. The licence applicant/holder and product manufacturer must have effective waste management policies and procedures and/or a waste management programme.
- b. Licence holders must report annually to The Trust 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 for energy recovery;
 - waste generation related to production;

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- initiatives taken to reduce waste generation and improve recovery/recycling of waste; and
- initiatives or requirements for suppliers or contract manufacturers.

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 accompanied by documentation that:

- describes the waste management policies, procedures and programmes; and
- includes annual reports on waste generation and management.

5.6 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.
- b. Licence holders must report annually to The Trust 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; and
 - initiatives or requirements for suppliers or contract manufacturers.

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 accompanied by documentation that:

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

5.7 Product stewardship

Criteria

- a. The recycled rubber product (or component) must not be impregnated, labelled, coated or otherwise treated in a manner which would prevent recycling in New Zealand or in the country where the product is used.
- b. Licence holders must report annually to ECNZ on product stewardship, including:
 - availability, feasibility, and involvement in product takeback schemes;
 - initiatives taken to promote or implement takeback schemes;
 - initiatives taken to make products more recyclable;

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- initiatives to promote product stewardship to customers; and
- initiatives or requirements for suppliers or contract manufacturers.

Verification required

Conformance with these criteria 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:

- process information demonstrating that coatings/ labels do not prevent the product form being recycled;
- documentation that describes the product stewardship initiatives, procedures, and programmes; and
- annual reports on the product stewardship scheme.

5.8 Packaging

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 must not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent recycling (i.e. metallic labels).
- c Information shall be provided to The Trust 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; and
 - 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).

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- d Cardboard packaging shall consist of any combination of:
- packaging licensed under EC-10; or
 - recycled content; and/or
 - virgin fibre from native forests, provided the forests are covered by a current Sustainable Forest Management (SFM) certification; and/or
 - waste wood, or virgin fibre from plantations (including from farm forests or wood lots), provided the sources are legally harvested.

NOTE: Please see Appendix A for details of acceptable evidence of legal harvesting and SFM certifications.

Verification required

Conformance with these criteria 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 with the following documentation and evidence.

- Conformance with criterion (a) shall be supported by documentation verifying the packaging is recyclable.
- Conformance with criterion (b) shall be demonstrated by providing samples of all plastic containers and components, and information on their constituent parts and their recyclability.
- Conformance with criteria (c) shall be demonstrated by providing initial and ongoing annual reports to The Trust 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 or by providing evidence that the packaging is covered by an Environmental Choice New Zealand licence.

6 Product characteristics

Criteria

The product shall be fit for its intended purpose and conform, as appropriate, to relevant product performance standards.

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement of 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 standards and or consumer/customer requirements;
- Documentation demonstrating how compliance is monitored and maintained;
- Records of customer feedback and complaints.

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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 service delivery records and the right of access to service 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 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 marketing materials 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 "Recycled Rubber Product" and by the Licence Number e.g. 'licence No1234'.

The Label must be reproduced in accordance with the ECNZ 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 ECNZ Label and advertising could result in the Licence being withdrawn.

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Appendix A: Explanatory notes for types of claims that can be used to demonstrate compliance with the criteria set in 5.8(d).

Clause 5.8(d) requires details of forest management certifications, chain-of-custody certifications, and physical controls for SFM certified wood through the supply chain from the forest to the manufacturer. It does not require that the finished product carry a FSC or PEFC (or equivalent) label, nor does it require any information about FSC or PEFC credits generated in the supply chain or assigned to the finished products.

Legal harvesting – for fibre from plantations, and waste wood from all virgin fibre sources:

The following will be accepted as sources of information to demonstrate legal harvesting, where 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).
- Evidence of legal harvesting from the Global Forest Registry (www.globalforestregister.org)

Sustainable Forest Management (SFM) – for fibre from native forests:

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 for fibre from native sources accepted by The Trust are those which will ensure that fibre from sustainably managed native forests will be actually present in the final packaging used for ECNZ-licensed products. These are set out below.

Types of FSC claims²² on invoices or packing slips which can be used to demonstrate compliance with the SFM requirements:

- FSC 100 %
- FSC Mix Credit – only if the manufacturer can demonstrate that fibre from SFM is actually present in the ECNZ products.

FSC Controlled Wood does not demonstrate SFM.

²² *FSC Chain of Custody Certification – factsheet*. FSC UK, 14 January 2013.

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Types of PEFC claims²³ which can be used to demonstrate compliance with the SFM requirements:

- PEFC Certified – Physical Separation method.
- X % PEFC Certified – Volume Credit method – only if the manufacturer can demonstrate that fibre from SFM is actually present in the ECNZ products.

PEFC Controlled Sources does not demonstrate SFM.

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 Plans must be prepared in accordance with Standards and Guidelines for the Sustainable Management of Indigenous Forests²⁴ and guidance for preparing Sustainable Management Plans and Annual Logging Plans²⁵. 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.

²³ PEFC Chain of Custody Certifications – The Key to Selling Certified Products. PEFC, 2012.

²⁴ Standards and Guidelines for the Sustainable Management of Indigenous Forests, Fourth Edition. Ministry of Agriculture and Forestry 2009 (or any more recent edition applicable at the time of application for an ECNZ licence).

²⁵ Indigenous Forestry Sustainable Management: A Guide to Preparing Draft Sustainable Forest Management Plans, Sustainable Forest Management Permit Applications and Annual Logging Plans. Sustainable Programmes, Ministry of Agriculture and Forestry Policy 2009.

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