

The Australian Ecolabel Program Good Environmental Choice Australia Standard

Recycled Rubber Products



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Use of This Standard

This voluntary environmental labelling standard may be used by competent environmental assessors to establish product compliance to the Australian Ecolabel Program. Products that are certified with the mark of conformity, the “Good Environmental Choice Label” have been independently tested and demonstrate compliance to the environmental and social performance criteria detailed in this standard. The overall goal of environmental labels and declarations is the communication of verifiable and accurate information, which is not misleading, on environmental aspects of products and services. This encourages the demand for, and supply of, those products and services that cause less stress on the environment, thereby stimulating the potential for market-driven continuous environmental improvement.

This standard identifies environmental, quality, regulatory and social performance criteria that products sold on the Australian market can meet in order to be considered as good “environment practice”. Products that have been certified as complying to this standard may gain greater market recognition and a marketing advantage in government and business procurement programs, as well as broad consumer preference.

This standard can be used by Australian producers to guide their designs for environment programs by using the environmental criteria as key performance benchmarks to reduce the environmental loads of their product. The standard is necessarily restricted in its identification of environmental loads from the product life-cycle. Producers should consider other environmental measures along the product cycle, which are not included in this standard, in their environment program designs for and aim for even higher levels of environmental performance where technically possible.

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GOOD ENVIRONMENTAL CHOICE AUSTRALIA STANDARD

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Abstract

This Standard specifies environmental performance requirements of recycled rubber products for the Australian Ecolabel Program. The Australian Ecolabel Program complies with ISO 14024: "Environmental labels and declarations - Guiding principles" which requires environmental labelling specifications to include criteria that are objective, reasonable and verifiable.

Definitions

IARC is the acronym for the International Agency for Research on Cancer.

Label means the Good Environmental Choice Australia Label.

Recycled Content includes both pre and post-consumer content. Post-consumer recycled content is 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 recycled content is material diverted from the waste stream during a manufacturing process. Excluded is re-utilisation of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Rubber is a broad term covering both natural and synthetic elastic polymer materials.

VOC means any volatile organic compound having a vapour pressure of 0.01 kPa or more, at 20 °C, or having a corresponding volatility under the particular conditions of use.

1 INTRODUCTION

1.1 Purpose

This Standard seeks to define good environmental performance benchmarks for recycled rubber products. The voluntary environmental labelling standard implemented by the Australian Environmental Labelling Association (GECA) specifies environmental performance criteria for a wide range of rubber products as defined in the product category scope. This standard stipulates the environmental load of such products throughout the major aspects of their life cycle.

1.2 Background

Rubber is a core constituent of a large number of consumer and industrial products. Progress in the rubber industry has allowed the development of recycling systems for rubber with a comparatively lower level of environmental load compared to virgin materials. These recycled products have appropriate strength and performance characteristics making them suitable for their intended purpose.

The primary purpose of this standard is to define environmental performance criteria for products made from recycled rubber. Recycled rubber products are environmentally preferable because they reduce demand for virgin raw materials and reduce the amount of waste going to landfill. A very large proportion of recycled rubber comes from used car tyres, which otherwise create significant disposal problems. The environmental loads of recycled rubber products compared to non recycled virgin rubber material are often reduced.

This standard specifies requirements for the minimum quantities of recycled rubber by weight in the product and includes a restriction on carcinogenic materials and other highly toxic materials added to the recycled rubber product during manufacture. This standard also places restrictions on certain treatments or coatings that would prevent further recycling of the product.

2 STANDARD CATEGORY SCOPE

This standard is applicable to the following categories of rubber products that are manufactured partially or fully from recycled rubber.

- 2.1 Agricultural and horticultural supplies.
- 2.2 Building and construction materials.
- 2.3 Civil engineering products, road constructions, footpath constructions, traffic management and road safety products.
- 2.4 Flooring and Surface treatments, playground surfaces, stable mats, livestock flooring and house mats.
- 2.5 Containers.
- 2.6 Marine and Automotive products.
- 2.7 Household and Office Supplies, mouse mats, anti-static mats and household items.
- 2.8 Sporting goods.
- 2.9 Tyres.

3 ENVIRONMENTAL PERFORMANCE CRITERIA

3.1 Fitness for Purpose

Certified products should be good performers in their intended application. Certain standards of quality and durability are implicit in the Label. The manufacturer must ensure that the product is fit for its intended purpose and:

3.1.1 Applicable Standards

The product meets or exceeds the requirements of the relevant Australian Standard, or the product meets the applicable and accepted standard in its target market if it is to be exported, or

3.1.2 Demonstrated Performance

If there is no relevant Australian Standard, the product can demonstrate sufficient quality by providing testing reports from an independent organisation or case studies from installations demonstrating suitability and quality.

3.2 Material Requirements

3.2.1 Recycled Content

The quantity of recycled material must be significant in order to be recognised as being environmentally preferable to virgin materials. There are sometimes limitations to recycled content use due to strength and other requirements and the following levels have been set as minimum requirements for certification.

Table 1: Minimum recycled content requirements by category

Category	Recycled % w/w
2.1 - 2.4	50
2.5 - 2.8	75
2.9	50

Note: Where a product contains components other than rubber (e.g., steel reinforced roadside furniture), the % requirement applies to the rubber component and the total weight of the rubber component only.

3.2.2 Virgin Content

Non-recycled monomer or other petrochemical products for use as raw materials must be sourced from a production facility that complies with Section 4 of this Standard.

3.3 Hazardous Substances

3.3.1 Prohibited Substances

The following compounds, their functional derivatives or in-situ precursors shall not be added to finished products, their component parts or be used at any stage of the manufacturing process, including as preparatory agents, cleaners or degreasers in the production facility:

- Halogenated organic solvents or binding agents
- Elemental halogens (e.g., fluorine, chlorine, including in-situ precursors from halide salts).
- Fluoropolymer additives or coatings.
- Aniline based amines.
- The phthalates DEHP, DBP, DAP, BBP, DMP, DMT, DEP, DMEP and DIBP.
- Aziridine or polyaziridines.
- Pigments and additives that contain lead, tin, arsenic, cadmium, mercury or their compounds.
- CFC, HCFC, HFC or any ozone depleting substances.
- Polybrominated diphenyl ethers, or chlorinated organic flame retardants.
- 1,3 butadiene

It is accepted that the above substances may have been used in previous lifecycles. If 1,3 butadiene is suspected as being present, its concentration shall be less than 1 mg / kg.

3.3.2 Carcinogenic Substances

Recycled rubber products shall not emit carcinogenic substances in categories 1, 2A as classified by the International Agency for Research on Cancer.

Recycled rubber products shall not emit carcinogenic substances in category 2B as classified by the International Agency for Research on Cancer at levels greater than 5 % of national exposure standards during the in-use phase.

For a complete listing of all substances classified by the IARC, refer to:
<http://monographs.iarc.fr/ENG/Classification/index.php>

3.3.3 Volatile Organic Compound Emissions

Products must not produce a total VOC concentration greater than that specified in Table 2 within seven days of unpacking, when measured with the following Standard Test Methods, or comparable:

- D5116-06 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products

- D6670-01(2007) Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products

Table 2: Maximum total VOC emissions for each class of recycled rubber product

Category	Description	Max VOC (mg/m³)
2.1	Agricultural and horticultural supplies	1
2.2	Building and construction materials	0.5
2.3	Civil engineering products	2
2.4	Flooring and Surface treatments	0.5
2.4	Childrens play equipment and flooring	0.3
2.5	Containers	0.5
2.6	Marine and Automotive products	2
2.7	Household and Office Supplies	0.3
2.8	Sporting goods	0.5
2.9	Tyres	2

3.4 Post Consumption Recycling, Coatings, Labels and Other Treatment

3.4.1 Recyclability and Product Stewardship

If the product is not recyclable (or separable into recyclable parts) in mainstream local recycling systems, the manufacturer shall accept their product without additional cost (excluding transportation costs) for further recycling, or have arrangements with a local recycler to accept the product, or have an established product stewardship program that will divert the majority of recovered material from landfill. Exceptions may apply to material contaminated by the user (e.g., medical, nuclear). Normal dust and other environmental accumulations do not qualify for this exemption.

3.4.2 Impregnations or Coatings

The recycled rubber product (or component) must not be impregnated, labeled, coated or otherwise treated in a manner which would prevent further post consumer recycling. Exemption may be made for products with a long product life where a coating or treatment would further extend the useful life of the product.

3.4.3 Separability

Non-homogeneous certified products must be easily separable with common tools at the normal end of life to facilitate recycling of individual components. Exemption may be made for products with a long product life where non-separable bonding would further extend the useful life of the product.

3.5 Packaging Requirements

Chlorinated or halogenated plastics must not be used in product packaging.

Used packaging shall be able to be recycled by local recycling systems.

4 COMPLIANCE TO ENVIRONMENTAL REGULATIONS

The applicant is required to comply with relevant environmental legislation and government orders at the Local, State, and Commonwealth levels, if these have been issued. An applicant's compliance with these criteria may be established by undertaking a series of random checks; and/or by gathering samples of applicant operational procedures and documents from approved assessors as evidence to support compliance during the verification. Where an applicant is from an overseas jurisdiction, that jurisdiction's environmental regulations apply. Where the applicant is subject to a guilty verdict by a legally constituted court in the last 24 months on the basis of a breach of any environmental legislation or permits, there must be evidence of corrective action.

5 COMPLIANCE TO LABOUR, ANTI-DISCRIMINATION AND SAFETY REGULATIONS

An applicant shall demonstrate that all employees are covered by a Federal or State award or a certified industrial agreement or a registered workplace agreement as determined by the Industrial Relations Commission, the Employment Advocate or a State or Territory Workplace Relations Agency or a workplace agreement in compliance with Workplace Relations Act 1996 Part 7 – The Australian Fair Pay and Conditions Standard.

An applicant shall demonstrate general compliance to the terms of State or Territory Legislation concerning Occupational, Health and Safety and/or the *Commonwealth Safety, Rehabilitation and Compensation Act 1988*, where applicable. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by an Australian Court within the last 24 months, on the basis of a breach of State, Territory or Commonwealth Occupational, Health and Safety Legislation, there must be evidence of corrective action.

The applicant shall demonstrate general compliance to the requirements of the Racial Discrimination Act 1975, Sex Discrimination Act 1984, Disability Discrimination Act 1992, Equal Opportunity for Women in the Workplace Act 1999, and complementary State Legislation. Applicants cannot be in the list of 'named' or non-compliant employers under the Equal Opportunity for Women in the Workplace Act 1999. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by an Australian Court in the last 24 months on the basis of a breach of these Acts, there must be evidence of corrective action.

Where an applicant is from an overseas jurisdiction, the applicant shall demonstrate general compliance to that jurisdiction's anti-discrimination, occupational health and safety, and workers' compensations regulations. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by a legal court in their respective country within the last 24 months on the basis of a the breach of anti-discrimination, occupational health and safety, and workers' compensation regulations, there must be evidence of corrective action.

An applicant's compliance with these criteria may be established by undertaking a series of random checks; gathering samples of applicant operational procedures and documents from approved assessors; and/or by providing a self-declaration document signed by an executive officer of the applicant organisation as evidence to support compliance during verification.

6 EVIDENCE OF CONFORMANCE

6.1 Audit Methodology

Conformance with this standard shall be demonstrated by undertaking an assessment under the above criteria by an approved assessor, following the certification and verification procedures detailed in the Good Environmental Choice Australia Ltd Documented Quality Management System, which generally follows the environmental auditing requirements of ISO 19 011.

6.2 Assessor Competency

The Australian Ecolabel Program classifies approved assessors as:

- a. Assessors registered by Good Environmental Choice Australia Ltd as environmental professionals that hold expertise relevant for an assessment, and who have undertaken training in the procedures of the Australian Ecolabel Program; or
- b. Environmental auditors accredited with the RABQSA.

6.3 Suitable Sources

Audit evidence should be of such a quality and quantity that competent environmental auditors, working independently of each other, will reach similar audit findings from evaluation of the same audit evidence against the same audit criteria.

Suitable sources of information to establish compliance may be, but are not limited to:

- a. Technical specification of the product.
- b. Obvious characteristics of the product under examination.
- c. Scientific test results and reports.
- d. Environmental management system and audit reports and results.
- e. Life-cycle assessment of each stage of the product life-cycle via a physical audit and examination.
- f. Life-cycle assessment via scientific testing.
- g. A statement of confirmation by an executive officer.
- h. An assessment of company or government records.
- i. Other material that can be considered objective evidence.

6.4 Laboratory Testing

New testing shall be undertaken by a laboratory accredited by the National Association of Testing Authorities (NATA), or similar overseas accreditation agents who can conduct the relevant tests and/or provide documentation detailing environmental performance against the criteria of this standard. The test results should be presented on NATA-endorsed reports or from a laboratory acceptable to Good Environmental Choice Australia Ltd.

If test results or environmental auditing results are not available, and/or there is insufficient data to establish full compliance with the criteria required by this standard, then certification cannot be awarded.