

The Australian Ecolabel Program Good Environmental Choice Australia Standard

Audiovisual Equipment



ISSUED BY GOOD ENVIRONMENTAL CHOICE AUSTRALIA LTD
PO BOX 4140, WESTON CREEK ACT 2611
PHONE: +61 (02) 6287 3100
FAX: +61 (02) 6287 3800
E-MAIL: STANDARDS@GECA.ORG.AU

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.

For further information please contact:

Good Environmental Choice Australia Ltd
Standards Review and Development
Ph: +61 (2) 6287 3100
E-mail: standards@geca.org.au

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Good Environmental Choice Australia Ltd
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GOOD ENVIRONMENTAL CHOICE AUSTRALIA STANDARD

Audiovisual Equipment

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Abstract

This Standard specifies environmental performance requirements of audiovisual 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

Alloy: A combination of two or more elements, at least one of which is a metal. This includes binary, tertiary and quaternary alloys (two, three and four elements, respectively). The result is a metallic substance with properties different from those of its components.

CRT is an acronym for Cathode Ray Tube.

DVD is an acronym for Digital Video Disk.

Edge Glued Panels: Glued processed timbers, such as small lumbered wood or wood layers, that are formed and pressed into sheet form in the direction of fibre, paralleled each other and bonded with resin. These panels are often known as veneer panels.

Fibre Board: Boards composed of plant fibres, such as timbers or chaffs. According to the density, they are categorized 'into insulation boards (IB)', 'medium density fibre boards (MDF)' and 'hard boards (HB)'.

Label means the Good Environmental Choice Australia Label.

LCD is an acronym for Liquid Crystal Display, although it has become a generic term for non-plasma type flat displays regardless of the degree of crystallinity.

Particle Boards: Boards made from wood fragments (chips or shavings) which are formed and pressed into sheet form and bonded together with resin.

PDP is an acronym for Plasma Display Panel, a common flat-panel display type.

Recycled Content includes *post-consumer material*, which is 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; and *pre-consumer material*, which is 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.

VCD is an acronym for Video Compact Disk, sometimes also known as CD Digital Video.

VCR is an acronym for Video Cassette Recorder.

1 INTRODUCTION

1.1 Purpose

This Standard seeks to define good environmental performance benchmarks for a broad range of audiovisual equipment. The voluntary environmental labelling standard implemented by Good Environmental Choice Australia (GECA) as part of the Australian ecolabel program specifies environmental performance criteria for televisions, video recorders, CD and DVD players, stereo and hi-fi systems. This standard stipulates the environmental load of such products throughout the major aspects of their life cycle.

1.2 Background

This Standard is a voluntary environmental labelling standard which specifies requirements for audiovisual equipment. The environmental loads from the production, service and use of these products are widespread and numerous.

Given the large number of possible environmental loads resulting from the manufacture, use and disposal of audiovisual equipment, it is important to develop low energy products containing re-usable and or recyclable components in order to reduce the major aspects of the environmental loads over the product life cycle. The primary purpose of this standard is to define environmental performance criteria for the most harmful environmental and human health hazards of audiovisual equipment and to use these criteria as indicators of general environmental performance of this product group.

The standard aims in particular at promoting:

- The minimisation of non-recyclable hybrid material types used.
- The minimisation of environmentally hazardous substances during manufacturing and use.
- The reduction of energy consumption during use.
- The environmental issues of disposal and recycling at the end of the useful lifecycle.

2 STANDARD CATEGORY SCOPE

This standard is applicable to the following categories of audiovisual equipment powered by mains power:

2.1 Television Sets and TV Combinations

This category includes television sets that are powered by mains power, equipped with the functions of receiving and displaying TV transmission signals, regardless of the method of signal transmission (e.g. analogue or digital) and displaying method (e.g. CRT, LCD, PDP or projection). The criteria also apply to the television sets integrated with other auxiliary functions (e.g. stereo speaker, video player, set-top box, etc).

2.2 Video Systems

This category includes devices designed to reproduce video and audio signals from a range of recording media (video cassette tape, VCD, DVD, etc) in conjunction with other visual display units and sound speaker units. Portable Video Media Players are excluded.

2.3 Set Top Boxes

This category includes devices designed to convert any source of external TV signal to content that may be displayed by a compatible television display device.

2.4 Stereo Systems

This category includes devices designed to reproduce audio signals from a range of recording media (cassette tape, vinyl records, CD, gramophone, etc) in conjunction with speaker units. Portable stereo systems are excluded.

This standard excludes equipment solely powered by batteries.

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 or International Standard, or the product meets the applicable Institute of Electrical and Electronic Engineers (IEEE) Standard, or

3.1.2 Demonstrated Performance

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

3.1.3 Warranty

The manufacturer shall offer a commercial guarantee on the quality of the product provided the product is used for its intended purpose. The period of this guarantee must be at least 3 years.

The guarantee shall be valid from the date of delivery to the consumer.

3.2 Energy Efficiency Requirements

All certified audiovisual equipment shall have an obvious and easily operated off switch. In the case of equipment that is operated by remote control, there must also be an off switch on the unit itself.

The energy consumption of certified products shall meet or exceed the following requirements:

3.2.1 Standby Modes

Power consumption in stand by modes must be less than the limits shown in Table 1.

Table 1: Maximum power consumption of audiovisual equipment in standby modes, in W. “Video combinations” refers to combined DVD/VCR or other combined dual format units.

Item	Passive Standby	Active Standby
Analogue TV	1	2
Digital TV	1	3
Digital TV with integrated receiver	6	9
DVD player / recorder	1	2
VCR or VHS player / recorder	2	2
Video combinations	2	2
Set top box	6	9
Stereo	1	2

3.2.2 Active Use Modes

For televisions, the maximum power consumption in active modes must be less than the limits shown in Table 2.

Table 2: Maximum power consumption of televisions during use, in W.

Type	Screen size				
	< 50 cm	< 70 cm	< 100 cm	< 150 cm	> 150 cm
Analogue	60	80	120	200	300
Digital	70	90	130	210	320
Digital with scan rate > 100 Hz	90	110	150	240	340
Digital with decoder	80	100	140	230	330
Digital with decoder and scan rate > 100 Hz	100	130	170	250	350

For video recording and playing units (DVD, VCR, etc and combinations thereof), maximum power consumption during use must be less than 15 W.

For stereo systems, maximum power consumption must be less than 50 W.

3.3 Material Requirements

The following requirements apply for each type of material contained in the finished product.

3.3.1 Plastics

Plastic parts must not contain polybrominated biphenols, polybrominated diphenyl ethers, brominated paraffins or short chain chlorinated paraffins.

Plastic parts (excluding reused parts) weighting greater than 25g shall satisfy the following criteria:

- Parts consist of one single type of polymer (homopolymer or copolymer) or recyclable plastic blend that may be recycled in mainstream recycling systems.
- Parts do not contain metal inlays that cannot be separated from the plastic.
- Parts do not have cadmium, lead or mercury intentionally added (e.g., catalyst or stabilizer). Exemptions will be made for electronic components and circuit boards.
- Parts do not contain halogens (exemptions for a maximum 0.5% by weight fluoroaditive may apply in some cases).
- Each individual plastic part is marked with an appropriate resin identification code promulgated by the Plastics and Chemical Industry Association (<http://www.pacia.org.au>) or in accordance with ISO 11469.

Exemptions may be made for products where the nature of the manufacturing process or the size and shape of the product restrict the application of the plastics resin identification code on the product. Exempt products will ensure that appropriate information describing disposal methods for the product, including the relevant resin identification code, are provided at the time of sale of the product to encourage further recycling.

3.3.2 Timber and Other Natural Materials

Timber and engineered wood or fibre parts including edge-glued (veneer) panels, particle boards and fibre board facings must fulfil the requirements of GECA Standard 28 – Indoor Furniture and Fittings or GECA 04 – Panel boards.

3.3.3 Glass

Lead glazing, crystal glass or wire reinforced glass must not be used in certified products. Colouring agents or other additives containing lead, cadmium, mercury, chromium, arsenic or selenium must not be used.

3.3.4 Metals and Alloys

Coatings applied to metals or alloys must not contain cadmium, nickel, tin or chromium. In exceptional cases, surfaces may be treated with chromium or nickel where this is necessary on the grounds of heavy physical wear or in the case of parts that require particularly tight connections. This exemption will not be granted to parts that are intended to come into frequent contact with skin.

Coatings applied to metals or alloys must not prevent recycling at the end of the normal life of the product (see Section 3.3.6) Metal fittings such as screws and bolts are exempt from this requirement where the coating serves to protect the product from staining due to corrosion. Coatings on any metal part must conform to the applicable Australian or international standard, if applicable.

3.3.5 Heavy Metals

3.3.5.1 Batteries and Accumulators

The content of certain heavy metals in batteries and accumulators may not exceed the following limits:

Table 3: Maximum heavy metal content in batteries and other specified parts

Metal	Max Concentration (ppm)
Mercury	1
Cadmium	10
Lead	100

For products with in-built batteries, batteries shall not be excluded from the full term of the manufacturers' warranty.

3.3.5.2 Displays

The background illumination for flat displays must not contain more than 1 mg of mercury per lamp.

Cadmium must not be added to CRT displays.

No display may contain more than 5 g of lead.

3.3.6 Coatings and Treatments

No product or component may be impregnated, labelled, coated or otherwise treated in a manner which would prevent post consumer recycling. Exemptions may be made for products with a long product life where a coating or treatment would further extend the useful life of the product.

3.3.7 Prohibited Substances

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

- Halogenated organic binding agents.
- Polybrominated diphenyl ethers, or brominated paraffins, short-chain chlorinated paraffins.

Aniline based amines.
The phthalates DEHP, DBP, DAP or BBP.
Aziridine or polyaziridines.
Alkylphenolethoxylates (APEO), their derivatives (APDs), or linear alkylbenzene sulphonates (LAS).
Pigments that contain lead, tin, arsenic, cadmium, mercury or their compounds.
CFC, HCFC, HFC or any ozone depleting substances.

3.4 Manufacturing Requirements

3.4.1 Waste Minimisation

The manufacturer must have effective policies and procedures to minimise waste, including measures to recycle waste materials from the production process.

The product must be designed in such a way that it can be safely processed after use by means of normal methods available in the market in which it will be used and disposed (e.g. re-use, recycling/reprocessing and/or safe disposal).

3.4.2 Design Requirements

The product should be accessible with commonly available tools. One qualified person, alone, must be able to dismantle the product into recyclable parts.

In-built batteries must be clearly marked, accessible and easily separable in order to facilitate recycling at end of life.

Incompatible and hazardous materials shall be clearly labelled, easily found and removable before recycling.

At least 80% (by weight) of plastics and metals in the housing and chassis shall be technically recyclable.

3.4.3 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.

Paper used for shock absorbent padding should be made from recycled pulp.

3.5 Product Custodianship

3.5.1 Spare Parts

Spare parts for product repair shall be made available for at least 5 years following the termination of production. This requirement only applies to parts that may be expected to fail with extended normal use (e.g., moving parts, switches). Parts which normally exceed the life of the product need not be provided as spares.

3.5.2 Product Take Back

Manufacturers must offer to take back their products at no cost (excluding transport) at end of life. The manufacturer must have in place an acceptable recycling or refurbishment system, or arrangements with a reputable electronics recycler with a traceable chain of custody, for products returned under this scheme.

Manufacturers are not obliged to take back items contaminated by users (e.g. medical or nuclear related use).

3.6 Product Information

The following information must be provided with the product:

- Power Management information including minimum and maximum energy consumption of the unit in each operating mode.
- A statement that the product consumes power in standby and draws zero power only while it is switched off at the power outlet, unless independent testing is able to prove otherwise.
- Service information giving advice on how the user can make use of the availability of spare parts and the take-back options at end of life.
- A statement that the equipment should not be disposed of in household waste or sent to landfill.
- Environmentally preferable cleaning recommendations.

Printed user instructions should be enclosed with new products so that information on the product or service is easily available to users.

3.7 Transference of Environmental Loads

Many aspects of manufacturing or product life cycle are not covered under this standard. It is expected that significant environmental risks or environmental load are managed by the manufacturer and that compliance to this standard does not result in transference of environmental loads. If an aspect of the product life cycle is grossly mismanaged, but is not directly covered by the above environmental performance criteria, assessors may issue a certificate of major non-compliance and recommend against certification under this Standard.

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.