

## **The Australian Ecolabel Program** **Good Environmental Choice Australia Standard**

# **Shampoos and Soaps**



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](mailto: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](mailto:standards@geca.org.au)

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Good Environmental Choice Australia Ltd  
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**GOOD ENVIRONMENTAL CHOICE AUSTRALIA STANDARD**

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## SHAMPOOS & SOAPS

### Document Status

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### Definitions

**AC** represents Active Content. It is the quantity, in weight, of all organic substances present in the product, excluding the water content of the components. Rubbing/abrasive agents in hand cleaning agents are not included.

**Anaerobically biodegradable** means that, when measured as directed in ISO 11734 "Water quality - Evaluation of the "ultimate" anaerobic biodegradability of organic compounds in digested sludge - Method by measurement of the biogas production", the substance achieves at least 60 % degradation.

**AS** means Australian Standard.

**ASTM** is the American Society for Testing and Materials

**Bioaccumulative** a substance is classified as potentially bioaccumulative if its octanol-water partition coefficient is greater than 1000 when measured with the following:

OECD 107. Octanol-Water Partition Coefficient (Flask Method).

OECD 107 must not be used for surfactants. Other test methods may be accepted, such as OECD 305.

OECD 117. Octanol-Water Partition Coefficient (HPLC Method).

**EDTA** refers to the chelating agent ethylene diamine-tetra-acetic acid.

**Endocrine disruptor** is an exogenous substance that mimics endocrine hormones and disrupts the endocrine systems of living organisms. Such action may lead to future health problems. In the report "*Towards the establishment of a priority list of substances for further evaluation of their role in endocrine disruption*" the European Union prioritised a list of substances for further research of their role as endocrine disruptors. This list is available in Appendix 1 of the report at [http://ec.europa.eu/environment/docum/pdf/bkh\\_annex\\_01.pdf](http://ec.europa.eu/environment/docum/pdf/bkh_annex_01.pdf)

**ISO** means International Organisation for Standardisation.

**OECD** is the Organisation for Economic Co-operation and Development.

**Priority Existing Chemicals** means an industrial chemical in respect of which a declaration under section 51 of the Industrial Chemicals (Notification and Assessment) Act, is in force. For the current list refer to: [http://www.nicnas.gov.au/Industry/Existing\\_Chemicals/Candidate\\_List\\_PDF.pdf](http://www.nicnas.gov.au/Industry/Existing_Chemicals/Candidate_List_PDF.pdf)

**pH** is a scale of numbers indicating the acidity or alkalinity of a solution. A pH of 7 is neutral, higher pH values are progressively more alkaline and lower pH values are progressively more acidic.

**Solvent** is a general term for a chemically diverse range of liquid substances which dissolve other materials.

**Surfactant** or surface-active agent is any substance which is intended to reduce surface tension, thereby helping water to surround and remove soils from surfaces.

**Readily biodegradable** surfactants are those where the average level of biodegradation observed in an aerobic sewage treatment plant is at least 90% during a residence time of not more than 3 hours. In order to meet this requirement the surfactant must either meet the requirement for ready biodegradability when determined using any of the following test methods:

- OECD Guidelines for Testing of Chemicals
- Test Guidelines 301A-301E, ISO 7827 (1994)
- AS 4351 (part 2 - 1996)

or achieve a biodegradability of at least 80% when tested by the OECD method. The pass level of 80% recognises the inherent experimental variability of the OECD test.

## 1 INTRODUCTION

### 1.1 Purpose

This Standard seeks to define good environmental performance criteria for shampoos, body washes, liquid and solid soaps, for the Australian Ecolabel Program. The voluntary environmental labelling standard set by Good Environmental Choice Australia (GECA) as part of 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, covering the major aspects of the product's life cycle.

All GECA ecolabelling standards are voluntary and require that products satisfy the relevant Australian or International Standard as a prerequisite for GECA certification.

While Australian Standards typically define "fit-for-purpose" criteria, they do not provide assurance of environmental preferability. GECA ecolabelling standards seek to define environmental performance benchmarks above and beyond the Australian Standards.

### 1.2 Background

This Standard is a voluntary environmental labelling standard which specifies requirements for shampoos, body soaps as well as liquid and solid soap products available on the Australian market.

Requirements are imposed on the classification of substances used, on degradability and bioaccumulability, fragrances and colouring agents, packaging and also on the efficiency of the products. As products are discharged to water after use, properties such as biological degradability, bioaccumulation and toxicity in aquatic environments are key considerations. This applies in particular to surfactants which are the most important component of the product, in terms of quantity and function. Hence, the environmental loads of such certified products are lowered compared to non certified products.

Skin sensitisers and other harmful substances are also considered in this standard. Thus this Standard not only recognises environmentally preferable shampoos and soaps, but are also those products that are less harmful to the consumers health.

## 2 PRODUCT CATEGORY SCOPE

This Standard encompasses cosmetic products used primarily for cleaning of skin and hair, which are removed with water after use. This includes:

- Shampoos
- Liquid and solid soap
- Shampoos, liquid and solid soap products for animals

### 3 ENVIRONMENTAL PERFORMANCE CRITERIA

#### 3.1 Fitness for Purpose

The product must be suitable for their intended application. Certain standards of quality and durability are implicit in the Mark.

**Criterion 1:** The manufacturer must be able to demonstrate that the product is fit for its intended purpose and:

##### 3.1.1 Pre-requisite

**Criterion 1.1:** The product must meet or exceed the requirements of relevant Australian Standards, or the applicable and accepted standard in its target market if it is to be exported.

Or

**Criterion 1.2:** If there is no relevant Australian or International Standard, the applicant must demonstrate sufficient quality by providing testing reports from an independent organisation demonstrating suitability and quality.

#### 3.2 Material Requirements

The following requirements apply to the finished product.

##### 3.2.1 Prohibited substances

**Criterion 2:** The following substances must not be present in the finished product.

- Linear alkylsulphonates (LAS), alkylphenoethoxylates (APEO) and alkylphenol derivatives (APD)
- Nitrotriacetate (NTA) (CAS No. 139-13-9)
- Boric acid, borates and perborates (including as pH regulators)
  
- Substances classified as R23 - R29 inclusive.
- Substances classified as R45 - R49 inclusive.
- Substances classified as R60 - R68 inclusive.
  
- Chemical compounds that have been identified by the Australian Department of the Health and Ageing as a Priority Existing Chemicals.
- Chemical compounds that have been prioritised for research by the European Union as Endocrine disruptor.

##### 3.2.2 Restricted Substances

**Criterion 3:** The complexing agent, EDTA (CAS No. 64-02-8), its salt and phosphonates may be present only in solid soap, with the total quantity  $\leq 0.6$  mg/g AC.

**Criterion 4:** Aerobic and anaerobic non-biodegradable organic substances (aNBDO & anNBDO), with the exception of surfactants, must not exceed the limits in Table 1. These limits also apply for products intended for animals.

**Table 1.** Aerobic and anaerobic non-biodegradable organic substance limits.

Substance	Limit
Shampoo, body washes, liquid soap:	15 mg/g AC
Solid soap:	10 mg/g AC
Conditioner:	30 mg/g AC

### 3.2.3 Surfactants

**Criterion 5:** All surfactants must be readily biodegradable.

In testing biodegradability, test method No.301 (A to F) in *OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144)* or other equivalent test methods should be used.

**Criterion 6:** All surfactants must also be anaerobically biodegradable.

For testing anaerobic biodegradability, ISO 11734, ECOTOC No.28 (1988) or equivalent test methods should be used. The requirement is a minimum of 60% degradability under anaerobic conditions.

### 3.2.4 Colours

**Criterion 7:** All colourants used must be included in the “*List of Colouring Agents Allowed for Use in Cosmetic Products*” in Annex IV (pg 48 – 53) of *European Commission Directorate 76/768/EEC, (1976)* on the *Approximation of the Laws of the Member States relating to Cosmetic Products (OJ, L 262, 27.9.1976, p169)*.

**Criterion 8:** Organic colouring agents must not be bioaccumulative.

In testing bioaccumulativity, test method ISO 11734 *Water quality - Evaluation of the "ultimate" anaerobic biodegradability of organic compounds in digested sludge - Method by measurement of the biogas production*, or other equivalent test methods should be used

### 3.2.5 Fragrances

**Criterion 9:** Fragrances used must comply with the International Fragrance Association’s (IFRA) Guidelines as described in *Code of Practice* ([www.ifraorg.org/guidelines.asp](http://www.ifraorg.org/guidelines.asp)).

**Criterion 10:** Fragrances shall not be added to baby or infants products.

**Criterion 11:** The fragrances in Table 2. must not be in the product:

**Table 2.** Prohibited Fragrances

Name	CAS no.
Moskusxylene	81-15-2
Moskusambrette	83-66-9
Moskene	116-66-5
Moskustibetin	145-39-1
Moskusketone	81-14-1
AHTN	1506-02-1
	21145-77-7
HHCB	114109-62-5
	114109-63-6
	1222-05-5
	78448-48-3
	78448-49-4

**Criterion 12:** The fragrance substances in Table 3. are classified as sensitising must not be present in the product in quantities exceeding 0.01% w/w.

**Table 3.** Sensitising Fragrances

<b>Name</b>	<b>CAS no.</b>
Amyl cinnamal	122-40-7
Benzyl alcohol	100-51-6
Cinnamyl alcohol	104-54-1
Citral	5392-40-5
Eugenol	97-53-0
Hydroxycitronellal	107-75-5
Isoeugenol	97-54-1
Amylcinnamyl alcohol	101-85-9
Benzyl salicylat	118-58-1
Cinnamal	104-55-2
Coumarin	91-64-5
Geraniol	106-24-1
Methyl heptine carbonate	31906-04-4
Anisyl alcohol	105-13-5
Benzyl cinnamat	103-41-3
Farnesol	4602-84-0
2-(4-tert-butylbenzyl)-propionaldehyd (Lilial)	80-54-6
Linalool	78-70-6
Benzyl benzoate	120-51-4
Citronellol	106-22-9
Hexyl cinnamaldehyd	101-86-0
d-Limonen	5989-27-5
Methyl heptin carbonat	111-12-6
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-on	127-51-5
Oak moss	90028-68-5
Tree moss	90028-67-4

### 3.3 Manufacturers Requirements

#### 3.3.1 Packaging requirements

**Criterion 13:** Chlorinated or halogenated plastics must not be used in product packaging.

**Criterion 14:** Plastic packaging weighing greater than 50g must be labelled 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.

**Criterion 15:** Packaging must not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent recycling (e.g., metallic labels).

#### 3.3.2 Product Information

**Criterion 16:** The product must be accompanied by instructions for proper use so as to maximise product performance and minimise waste.

**Criterion 17:** Certified products must display a list of product ingredients on the container.

#### 3.3.3 Product Testing

**Criterion 18:** Certified products shall not have been tested on animals.

#### **4 COMPLIANCE WITH 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 signed 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 an ISO 17 025 registered laboratory, or a similarly independent accreditation agent 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.