

Final Standard No: GECA 18-2006
Issued: 1 January 2006
Validity: 5 years

The Australian Ecolabel Program

Australian Voluntary Environmental Labelling Standard

Laundry Detergents



ISSUED GOOD ENVIRONMENTAL CHOICE AUSTRALIA
PO BOX 4140, WESTON CREEK, ACT 2606
PHONE: +61 (02) 6287 3100
FAX: +61 (02) 6287 3800
E-MAIL: OFFICE@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 “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, through communication of verifiable and accurate information that is not misleading, on environmental aspects of products and services, to encourage 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 best “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 and broad consumer environmental preference.

This standard can be used by Australian producers to guide their design for environment programs by using the environmental criteria as key performance benchmarks that 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 improvement along the product cycle not included in this standard for their design for environment programs and aim for even higher levels of environmental performance where technically possible.

For further information please contact:

Good Environmental Choice Australia
Standards Review and Development
E-mail: standards@geca.org.au

This document may be copied only in its entirety and without any type of change. Quotations may be made provided that the Good Environmental Choice Australia. is stated as the source. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Good Environmental Choice Australia
PO Box 4140. WESTON CREEK, ACT 2606 Australia.
Printed in Australia

CONTENTS

Abstract:	4
Current Status:	4
Date Published:	4
No of Pages:	9
Definitions:	4
1.0 Background	5
2.0 Product Category Scope of Standard	6
3.0 Environmental Performance Criteria	6
4.0 Compliance Testing	8

Voluntary Environmental Labelling Standard

Laundry Detergents

Abstract

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

<u>Current Status:</u>	Final Standard Version 2.0
<u>Date Published:</u>	1 January 2004, Reviewed 1 January 2006
<u>Total No of Pages:</u>	10

Definitions:

“**AS**” means Australian Standard.

“**ASTM**” means American Society for Testing and Materials.

“**Builder**” means any substance intended to maintain alkalinity, and/or bind calcium and magnesium ions (soften the water), and/or keep the soil in suspension, increasing the effectiveness of the detergent. It includes substances such as phosphates, NTA, EDTA, zeolites, sodium citrate, sodium silicate and sodium carbonate.

“**Carcinogenic**” means capable of causing cancer.

“**EDTA**” means ethylene diamine-tetra-acetic acid or ethylene dinitrilo-tetra-acetic acid or any of its salts.

“**Fluorescent whitening agent (FWA)**” means a compound which by its presence in or on a near-white surface, creates a visual whitening effect by virtue of fluorescence.

“**Formulated or manufactured with**” refers to the preparation of the detergent and not to the preparation of the components of the detergent unless the components are specifically mentioned in the product specific requirements. Residual or unreacted components are covered by the product specific requirements.

“**Fragrance & Colouring**” means organic substances that are added primarily for aesthetic reasons to give colour and smell. Fragrance can also conceal smells from other ingredients and from the washing up itself.

“**Genotoxin**” means a substance capable of causing damage to genetic material, such as DNA.

“**Hand dishwashing detergents**” means any cleaning product based on surfactants intended for use in washing dishes by hand.

“**ISO**” means International Organisation for Standardisation.

“**Label**” means the Environmental Choice Australia Label.

“**Mutagenic**” means able to produce a mutation.

“**OECD**” means Organisation for Economic Co-operation and Development.

“**pH**” is a scale of numbers indicating how acidic or alkaline water is. A pH of 7 is neutral, higher pH values are progressively more alkaline and lower pH values are progressively more acidic.

“**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 including the 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, published in the OECD technical report of 11 June 1976 on the Proposed Method for the Determination of the Biodegradability of Surfactants used in Synthetic Detergents. The pass level of 80% recognises the inherent experimental variability of the OECD test.

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

“**Teratogenic**” means able to produce abnormalities in a developing foetus, that is, causing birth defects.

1.0 Background

Millions of kg of laundry detergents (powder and liquids) is consumed in Australia each year. This represents a potentially significant burden on the environment in terms of wastewater loading and subsequent treatment, resource consumption and disposal of packaging materials.

The major active components in laundry detergents are surfactants and builders.

Detergent components, such as surfactants, may accumulate and may be toxic or otherwise harmful in the environment. Surfactants provide a significant load on sewage systems.

Builders serve to overcome water hardness and improve surfactant performance. Tripolyphosphate is the most commonly used builder in Australia. Soda ash (a sodium carbonate) is also used as a builder and source of alkaline reserve. It is important to note that builders increase the efficiency of the surfactant and reduce the amount of surfactant needed. Such additives can be justified and their exclusion may be counterproductive.

Phosphate may be a limiting nutrient in some aquatic environments and in some other countries the use of phosphate in detergents has been discouraged to prevent unsustainable plant growth and oxygen starvation (eutrophication) of lakes and waterways.

Other components may include bleaches, fluorescent whitening agents, preservatives, dyes, solvents, fillers, perfumes, corrosion inhibitors and enzymes. Some of these ingredients, such as enzymes, contribute to the performance of the detergent. Some have other purposes such as corrosion inhibition, while others are merely cosmetic.

A desirable goal is to reduce or eliminate components that do not aid the removal of soil, so reducing stress on sewage systems, in particular, and on the environment, in general. To maintain a balance between consumer acceptability and environmental concerns, the advantages and disadvantages must be weighed for each component.

To reduce environmental and health impacts, components of laundry detergents should either be environmentally innocuous or should readily biodegrade, and the products of degradation should not pose an increased risk to the environment.

Based on a review of currently available information, the following product category requirements will produce environmental benefits by reducing water pollution by reducing the volume of total chemicals used in the products and by limiting the use of potentially hazardous ingredients, conserving transport and energy and by minimising waste production by reducing the amount of primary packaging. As information and technology change, product category requirements will be reviewed, updated and possibly amended.

2.0 Product Category Scope

This category “laundry detergents” shall comprise all laundry detergents, in powder, liquid or any other form, for the washing of textiles, and which are intended to be used principally in household machines, but not excluding the use in launderettes and common laundries.

3.0 Environmental Performance Criteria

3.1 Fitness for Purpose

Certified products should be good performers in their intended application. It is implied that certain standards of product performance are implicit in the label. Certified product must ensure that the product is fit for its intended purpose and where relevant:

- 3.1.1 The product meets the performance requirements of the relevant Australian Standard for its intended application; or
- 3.1.2 The product meets any other internationally accepted standard if it is to be exported;

3.2 Formulation Requirements

The laundry detergent shall not be formulated or manufactured with:

- EDTA;
- NTA;
- trichloroethane;
- chlorine or chlorine compounds;
- xylene sulfonate;
- more than 0.1% by weight of formaldehyde or formaldehyde donors expressed as formaldehyde;
- opacifiers; or
- alkyl phenol ethoxylates (APEO) actives

- substances classified as carcinogenic according to the approved criteria for the classification of hazardous substances by the National Industry Chemical Notification and Assessment Scheme;
- greater than 0.1% of any ingredient that is classified or may be classified as mutagenic or tetragenic according to the approved criteria for the classification of hazardous substances by the National Industry Chemical Notification and Assessment Scheme;
- greater than 1% of any ingredient that is classified as a contact sensitiser or as a possible mutagen according to the approved criteria for the classification of hazardous substances by the National Industry Chemical Notification and Assessment Scheme;

3.3 Phosphonates

The total amount of phosphates (as sodium tripolyphosphate - STPP) at the recommended dosage shall not exceed 25ml/litre.

3.4 Surfactants

All surfactants must be readily biodegradable and anaerobically degradable.

3.5 Purity of Enzymes

The enzyme production micro-organism shall be absent from the final enzyme preparation.

3.6 Fragrance

Fragrance must be produced and used in accordance with the “Code of Practice” compiled by the International Fragrance Association (IFRA).

Fragrance containing the following mitromusk compounds must not be used because of their cancer risk:

Common Name	CAS-No
Moskusxylene	81-15-2
Moskusambrette	83-66-9
Moskene	116-66-5
Moskustibetin	145-39-1
Moskusketone	81-14-1

3.7 Colours

Colorants used must be included on the “List of Colouring Agents Allowed for use in Cosmetic Products” in Annex IV of European Commission Directorate 76/768/EEC, 27 July 1976 on the Approximation of the Laws of the Member States relating to Cosmetic Products (OJ L 262, 7.9.1976, p 169). A copy of the Directive is available in the document “The rules governing cosmetic products in the European Union”, Volume 1 Cosmetics legislation, 1999 Edition available at <http://pharmacos.eudra.org/F3/home.html>.

3.8 Consumer Information

The detergents must be accompanied by instructions for proper use so as to maximise product performance and minimise waste.

All detergents must display on the container a list of product ingredients which complies with the requirements of the EEC Commission Recommendation for Labelling of Detergents and Cleaning Products.

3.9 Packaging

All plastic containers and plastic components must be made of plastic that are recycled in Australia (or the country to which the product is exported and sold).

Packaging must not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent recycling (i.e. PVC sleeves, metallic labels).

All plastic packaging (i.e. container, cap, measuring device) must have a plastic resin identification code clearly visible on each item.

Packaging (including labels) must not contain PVC or any type of chlorinated materials.

The cardboard packaging shall consist of $\geq 70\%$ recycled material.

3.10 – Suitability for Local Wastewater Systems

Detergents that seek to be assessed for suitability for compliance environmental criteria for local waste water systems or on-site systems and to declare that environmental characteristic as part of the voluntary environmental labelling declaration use must comply with the following requirements.

The total sodium load per wash shall be less than 21 gram per 150 litre (0.14gr/l)

3.11 Compliance to Environmental Regulations

The applicant is required to comply with relevant environmental legislation and government orders at the Local, State and Commonwealth level, if these have been issued. An applicant's compliance with this criterion may be established by undertaking a series of random checks and gathering samples of applicant operational procedures and documents by approved assessors as evidence to support compliance during the verification and /or a statement of self declaration by an executive officer of the applicant organisation. Where an applicant is from an overseas jurisdiction, that jurisdictions environmental regulations apply.

3.12 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.

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 jurisdictions 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 compensations 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 and gathering samples of applicant operational procedures and documents by approved assessors as evidence to support compliance during the verification and /or a statement of self declaration by an executive officer of the applicant organisation.

4.0 Compliance Testing

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

The Australian Ecolabel Program classifies approved assessors as:

1. Assessors registered by the Good Environmental Choice Australia as environmental professionals that hold expertise relevant for an assessment and which have undertaken training in the procedures of the Australian Ecolabel Program, or
2. Environmental auditors accredited with the Quality Society of Australasia; or
3. Assessors registered with the Environmental Choice New Zealand Trust.

New testing shall be undertaken by a laboratory accredited by the National Association of Testing Authorities (NATA) or similar overseas accreditation to carry out the relevant tests and/or documentation detailing environmental performance against the key indicators for this standard. The tests results should be presented on NATA endorsed reports or from a laboratory acceptable to Good Environmental Choice Australia

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:

- 1) Technical specification of the product.
- 2) Obvious characteristics of the product from examination.
- 3) Scientific and test results and reports.
- 4) Environmental management system and audit reports and results.
- 5) Life cycle assessment of each stage of the product life cycle via a physical audit and examination.
- 6) Life cycle assessment via scientific testing.
- 7) A statement of confirmation by an executive officer.
- 8) An assessment of company or government records.
- 9) Other material that can be considered objective evidence.

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