

## The Australian Ecolabel Program Good Environmental Choice Australia Standard

# Refrigerants



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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 refrigerants 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

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

**ODP** means Ozone Depletion Potential defined in this standard as the comparative ozone depleting ability over a 100 year time frame of a compound in comparison to the ozone depleting ability of CFC -11, which is arbitrarily assigned an ODP of 1.0

**GWP** means Global Warming Potential. It is defined as the cumulative radiative forcing - both direct and indirect - integrated over a specified period of time (100 years in this Standard) from the emission of a unit mass of gas relative to the cumulative radiative forcing of carbon dioxide. CO<sub>2</sub> has a GWP of 1.0.

## 1 INTRODUCTION

### 1.1 Purpose

This Standard seeks to define good environmental performance benchmarks for refrigerants. The voluntary environmental labelling standard implemented by Good Environmental Choice Australia (GECA) as part of the Australian ecolabel program specifies environmental performance criteria for refrigerants for use in a variety of applications. 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 refrigerant products used in the Australian market. Refrigerants are used for the purpose of air conditioning, refrigeration and cooling applications in a wide variety of commercial and domestic settings, as well as in heat pumps, or “reverse cycle” systems.

Refrigerants used in air conditioning and refrigeration have significantly contributed to global warming in addition to ozone depletion. Ozone depleting CFC and HCFC compounds found wide application as refrigerants before the significance of ozone depletion was discovered, and industry has slowly been forced to switch to non-ozone depleting substances. However, many of the HFC and other compounds used to replace the original CFC refrigerants also contribute significantly to the global warming problem. “Natural” refrigerants, such as hydrocarbons, carbon dioxide and ammonia are the logical solution to this problem.

## 2 STANDARD CATEGORY SCOPE

This standard is applicable to all categories of refrigerants including:

- Domestic and Industrial Air Conditioning Systems.
- Domestic and Industrial Refrigerators.
- Vehicle air conditioning systems.

### **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 (AS 1677), or the product meets the applicable and accepted standard in its target market if it is to be exported, or

#### **3.2 Material Requirements**

The following requirements apply using ODP and GWP values as defined by the Montreal Protocol and its appendices, as amended from time to time. If a refrigerant that is not defined under the protocol is used, it may be tested in accordance with the test methods accepted by the protocol.

##### **3.2.1 Ozone Depletion Potential**

The Ozone Depletion Potential of the refrigerant must comply with the following:

ODP = 0.0

##### **3.2.2 Global Warming Potential**

The Global Warming Potential of the refrigerant must comply with the following:

GWP ≤ 50

#### **3.3 Post Consumption Recycling and Labelling**

##### **3.3.1 Packaging Custodianship**

Packaging and delivery containers for refrigerants shall be commonly recyclable by end users or shall be subject to a product stewardship take-back arrangement with the manufacturer or agent.

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

##### **3.3.2 Product Information**

The refrigerant must be accompanied by the following information for product suppliers, installers and consumers:

- The recommended safe handling, installation and disposal methods.
- The recommended cleaning and maintenance agents/methods.
- Health hazard information including what to do in case of emergency.
- Precautions for use.

#### 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 COMPLIANCE TESTING

### 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 14 011 and 14 012.

### 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.