AS 1099.1—1989
IEC 68-1—1988

Australian Standard®

Basic environmental testing procedures for electrotechnology

Part 1: General

(IEC Title: Environmental testing, Part 1: General and guidance)

This Australian Standard was prepared by Committee ET/5, Environmental Testing Procedures. It was approved on behalf of the Council of Standards Australia on 25 October 1988 and published on 16 January 1989.

The following interests are represented on Committee ET/5:

Aerospace Technologies of Australia
Confederation of Australian Industry
Department of Administrative Services
Department of Defence
Electricity Supply Association of Australia
Institution of Engineers, Australia
National Association of Testing Authorities
Society of Automotive Engineers, Australasia
Telecom Australia
University of New South Wales

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PREFACE

This Standard was prepared by Committee ET/5, Environmental Testing Procedures, to supersede AS 1099.1—1980, *Basic environmental testing procedures for electrotechnology,* Part 1: *General.* It is identical with and reproduced from IEC 68-1 (1988), *Environmental testing,* Part 1: *General and guidance.*

Specific requirements for the performance of products are not specified in these Standards. The relevant product Standard should define the allowable performance limits during and after the application of appropriate test procedures together with the chosen severity for the test to be applied. Typical severities for the various tests are listed together with a method of classification for application to tested products.

This Standard forms part of the environmental test method series for electrotechnology. It defines and specifies the various atmospheric conditions which are to be used for measurements and tests designed to assess the ability of specimens to perform their expected functions under conditions applying to transportation and storage and other aspects of operation. Although designed for testing electrotechnical products this Standard is not restricted to them and may be used in other fields where so desired.

The page numbers of the IEC English text are given in the bottom left corner of each page of this Standard.

While the use of AS 1099 permits much useful information to be obtained, no information is given on assessing quality assurance aspects of a particular product or of products. For such information, reference must be made to the relevant product Standard and suitable Standards on quality assurance or reliability procedures and sampling techniques. In particular, reference should be made to the following Australian Standards:

AS	
1199	*Sampling procedures and tables for inspection by attributes*
1399	*Guide to AS 1199, Sampling procedures and tables for inspection by attributes*
1821	*Suppliers quality systems for design, development, production and installation*
1822	*Suppliers quality systems for production and installation*
1823	*Suppliers quality inspection systems*
2000	*Guide to AS 1821—1823, Suppliers Quality Systems*

For the purposes of this Australian Standard, the IEC text should be modified as follows:

Cross references: The cross references to other publications should be replaced by references to Australian Standards:

Reference to international Standard		*Australian Standard*	
IEC 68-2	*Environmental testing* Part 2: *Tests (1988)*	AS 1099.2	*Basic environmental testing procedures for electrotechnology,* Part 2: *Tests*
IEC 50	*International electrotechnical vocabulary (IEV)* (1979)	AS 1852	*International electrotechnical vocabulary (IEV)*
IEC 160	*Standard atmospheric conditions for test purposes* (1963)	—	
IEC 271	*List of basic terms, definitions and related mathematics for reliability* (1974)	AS 1211.1	*Reliability of electronic equipment and components* Part 1: *Terminology*
IEC 529	*Classification of degrees of protection provided by enclosures* (1976)	AS1939	*Classification of degrees protection provided by enclosures for electrical equipment*
IEC 695	*Fire hazard testing* (1982)	AS 2420	*Fire test methods for solid insulating materials and non-metallic enclosures used in electrical equipment*
IEC 721	*Classification of environmental conditions* (1981)	—	
ISO 554	*Standard atmospheres for conditioning and/or testing — Specifications* (1976)	—	
ISO 3205	*Preferred test temperatures* (1976)	—	

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STANDARDS AUSTRALIA

Australian Standard
BASIC ENVIRONMENTAL TESTING PROCEDURES FOR ELECTROTECHNOLOGY

PART 1: GENERAL

1. Introduction

1.1 IEC Publication 68 contains fundamental information on environmental testing procedures and severities of tests. In addition, Part 1 contains information on atmospheric conditions for measurement and testing.

It is intended to be used in those cases where a relevant specification for a certain type of product (electrical, electromechanical and electronic equipment and devices, their sub-assemblies and constituent parts and components), hereinafter referred to as "specimen", has to be prepared, so as to achieve uniformity and reproducibility in the environmental testing of this product.

Note. — Although primarily intended for electrotechnical products, many of the environmental testing procedures in Part 2 of this publication are equally applicable to other industrial products.

The expression "environmental conditioning" or "environmental testing" covers the natural and artificial environments to which specimens may be exposed so that an assessment can be made of their performance under conditions of use, transport and storage to which they may be subjected in practice.

The requirements for the performance of specimens subjected to environmental conditioning are not covered by this publication. The relevant specification for the specimen under test defines the allowed performance limits during and after environmental testing.

When drafting a relevant specification or purchasing contract, only those tests should be specified that are necessary for the relevant specimen taking into account the technical and economic aspects.

IEC Publication 68 consists of:

a) this first Part (Publication 68-1) which deals with generalities;

Note. — Attention is drawn to Publication 68-2-48.

b) the second Part (Publication 68-2) published as separate booklets each dealing with a family of tests or a particular test or guidance for their application;

Note — Attention is drawn to Publication 68-2-47.

c) the third Part (Publication 68-3) published as separate booklets each dealing with background information on a family of tests;

d) the fourth Part (Publication 68-4), giving information for specification writers, published in two sections of which the second, in loose-leaf form, contains summaries of all the current tests in Publication 68-2;

Note. — Fire hazard tests are separately published in IEC Publication 695.

