

Australian Standard™

Environmental testing

**Part 2.44: Tests— Guidance on test T:
Soldering**

This Australian Standard was prepared by Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 3 May 2004 and published on 7 June 2004.

The following are represented on Committee EL-026:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturer's Association
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Energy Supply Association of Australia
Testing Interests (Australia)

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PREFACE

This Standard was prepared by the Standards Australia Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment.

The objective of this Standard is to provide the electrotechnology industry with a complete set of environmental test procedures published as a series under AS 60068 *Environmental testing*. This Standard is Part 2.44 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-44:1995, *Environmental testing – Part 2-44: Tests—Guidance on test T: Soldering* including Corrigendum 1:1995.

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In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

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SECTION ONE – GENERAL

1 Scope

The purpose of this International Standard is to provide background information and recommendations for writers of specifications containing references to IEC 60068-2-20, IEC 60068-2-54 and IEC 60068-2-58.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60068. At the time of publication of this standard, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60068 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-2-20: 1979, *Environmental testing – Part 2: Tests – Test T: Soldering*
Amendment 2 (1987)

IEC 60068-2-54: 1985, *Basic environmental testing procedures – Part 2: Tests – Test Ta: Soldering – Solderability testing by the wetting balance method*

IEC 60068-2-58: 1989, *Environmental testing – Part 2: Tests – Test Td: Solderability, resistance to dissolution, metallization and to soldering heat of Surface Mounting Devices (SMD)*

Series IEC 60249, *Base materials for printed circuits*

IEC 60326-2: 1990, *Printed boards – Part 2: Test methods*

SECTION TWO – GENERAL PRINCIPLES

3 Introduction

The conditions on which the ease of making and the reliability of a soldered joint depend may be classified in three groups as follows:

- a) The joint design, determined by the choice of the two metallic elements to be joined (their shape, size, composition, etc.) and of the assembly method (relative position, initial fastening, etc.).