AS 60068.2.42—2004
IEC 60068-2-42:2003
Reconfirmed 2018

AS 60068.2.42—2004

Australian Standard™

Environmental testing

Part 2.42: Tests—Test Kc: Sulphur dioxide test for contacts and connections

STANDARDS AUSTRALIA

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 1 June 2004.
This Standard was published on 15 July 2004.

The following are represented on Committee EL-026:

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

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This Standard was issued in draft form for comment as DR 04247.

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 60068.2.42–2004
Environmental testing
Part 2.42: Tests–Test Kc: Sulphur dioxide test for contacts and connections

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Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 29 August 2018.

NOTES

Australian Standard™

Environmental testing

Part 2.42: Tests—Test Kc: Sulphur dioxide test for contacts and connections

First published as AS 60068.2.42—2004.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6119 4

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 2.42 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-42:2003, *Environmental testing* – Part 2-42: *Tests—Test Kc: Sulphur dioxide test for contacts and connections*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this international standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

(d) French text on figures should be ignored.

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.

Any international Standard referenced should be replaced by an equivalent Australian Standard where one is available. The availability of equivalent Australian Standards can be determined either from the Standards Australia catalogue or from the Standards Australia website (www.standards.com.au).

CONTENTS

NOTES

STANDARDS AUSTRALIA

Australian Standard

Environmental testing
Part 2.42: Tests—Test Kc: Sulphur dioxide test for contacts and connections

1 Scope and object

This test:

– is intended to provide accelerated means to assess the corrosive effects of atmospheres polluted with sulphur dioxide on contacts and connections;

– is particularly suitable for giving information on a comparative basis;

– is not suitable as a general corrosion test, i.e. it may not predict the behaviour of contacts and connections in industrial atmospheres.

NOTE In view of the limited information to be obtained from accelerated corrosion tests, particular attention should be paid to the guidance on this test given in IEC 60068-2-49. Reference should also be made to IEC 60355.

The object of this test is:

a) to determine the influence of atmospheres containing sulphur dioxide on the contact properties of precious metal or precious metal-covered contacts and connections, excluding contacts consisting of silver and some of its alloys;

b) to check solderless connections with regard to their tightness or effectiveness. In all tests, the major criterion of performance will be the change in contact resistance caused by exposure to the sulphur dioxide test atmosphere.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60512-2-1:2002, *Connectors for electronic equipment – Tests and measurements – Part 2-1: Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level method*

3 Test apparatus

The test apparatus consists of a climatic system, test enclosures, a gas delivery system and means for measuring gas concentration, detailed in Annex A.

3.1 Test chamber

The test chamber and its auxiliary parts shall be made of materials that do not react with or absorb sulphur dioxide and which do not influence the corrosive effects of the test atmosphere. The mixture of air and sulphur dioxide shall enter and leave the chamber through tubes with sufficiently large diameters such that the total flow through the chamber is at least three, but not more than five, changes of the atmosphere per hour. The exhaust from the chamber should not be allowed to enter the laboratory.