AS 60068.2.43—2004
IEC 60068-2-43:2003

Australian Standard™

Environmental testing

Part 2.43: Tests—Test Kd: Hydrogen sulphide 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 3 May 2004 and published on 11 June 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

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Part 2.43: Tests—Test Kd: Hydrogen sulphide test for contacts and connections

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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, to supersede AS 1099.2Kd—1981, *Basic environmental testing procedures for electrotechnology - Tests - Test Kd - Hydrogen sulphide test for contacts and connections*.

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 2.43 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-43:2003, *Environmental testing – Part 2-43: Tests—Test Kd: Hydrogen sulphide 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) Any 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 when 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).

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1 Scope and object

This test:

– is intended to provide accelerated means to assess the effects of the tarnishing of silver and silver alloys used for 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 60068-2-46. Reference should also be made to IEC 60355.

The object of this test is:

a) to determine the influence of atmospheres containing hydrogen sulphide on the contact properties of contacts made of:
   – silver or silver alloy;
   – silver protected with another layer;
   – other metals covered with silver or silver alloy.

b) to check solderless connections made of the same material as in item a) 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 test atmosphere containing hydrogen sulphide.

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.