Australian/New Zealand Standard™

Live working — Electrical insulating mats

STANDARDS Australia

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PAEREWA AOTEAROA

AS/NZS IEC 61111:2020

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The following are represented on Committee EL-004:

Australian Chamber of Commerce and Industry
Australian Industry Group
Consumer Electronics Suppliers Association
Consumers' Federation of Australia
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council (Australia)
Engineers Australia
International Accreditation New Zealand
Joint Accreditation System of Australia and New Zealand
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Live working — Electrical insulating mats

Originated in Australia as AS 2978—1987.
Jointly revised and redesignated as AS/NZS 2978:1995.
Revised and redesignated as AS/NZS IEC 61111:2020.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories, to supersede AS/NZS 2978:1995, *Insulating mats for electrical purposes*.

The objective of this Standard is to specify requirements for electrical insulating matting made of elastomer for use as a floor covering for the electrical protection of workers on electrical installations.

This Standard identical with, and has been reproduced from, IEC 61111:2009, *Live working — Electrical insulating matting.*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIVE WORKING – ELECTRICAL INSULATING MATTING

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61111 has been prepared by IEC technical committee 78: Live Working.

This second edition cancels and replaces the first edition, published in 1992, and its Amendment 1 (2002). This edition constitutes a technical revision.

It includes the following significant technical changes with regard to the previous edition:

- general review of the requirements and test provisions;
- modification of the test procedure for slip resistance;
- specification of standard and alternative types of electrodes for the proof test;
- increase of the conditioning time for low temperature folding test to 4 hours;
- modification of the test procedures for low and extremely low temperature by replacing the dielectric proof test by a withstand test in the sanction;
- modification of the test procedures for acid and oil resistance by specifying the use of test pieces and by replacing the dielectric proof test by a withstand test in the sanction;

- specification of liquid 102 for the oil resistance test and harmonisation of the mechanical test sanction with the acid resistance test;
- preparation of the elements of evaluation of defects, and general application of IEC 61318 Ed.3;
- revision of existing annexes;
- deletion of Annexes D and F, not applicable according to IEC 61318 Ed.3;
- introduction of a new normative Annex F on classification of defects.

The text of this standard is based on the following documents:

FDIS	Report on voting
78/784/FDIS	78/798/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This International Standard has been prepared according to the requirements of IEC 61477 where applicable.

The product covered by this standard may have an impact on the environment during some or all stages of its life cycle. These impacts can range from slight to significant, be of short-term or long-term, and occur at the global, regional or local level.

Except for a disposal statement in the instructions for use, this standard does not include requirements and test provisions for the manufacturers of the product, or recommendations to the users of the product for environmental improvement. However, all parties intervening in its design, manufacture, packaging, distribution, use, maintenance, repair, reuse, recovery and disposal are invited to take account of environmental considerations.

LIVE WORKING – ELECTRICAL INSULATING MATTING

1 Scope

This International Standard is applicable to electrical insulating matting made of elastomer for use as a floor covering for the electrical protection of workers on electrical installations.

NOTE 1 For a.c. electrical classification, as well as d.c. use, see 4.2.

NOTE 2 This document gives a.c. test provisions. There is limited history for use in d.c. applications.

NOTE 3 See Annex A for suggested maximum voltage use.

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 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60212:1971, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment*

IEC 61318, *Live working – Conformity assessment applicable to tools, devices and equipment*

IEC 61477, *Live working – Minimum requirements for the utilization of tools, devices and equipment*

ISO 2592, *Determination of flash and fire points – Cleveland open cup method*

ISO 2977, *Petroleum products and hydrocarbon solvents – Determination of aniline point and mixed aniline point*

ISO 3104, *Petroleum products – Transparent and opaque liquids – Determination of kinematic viscosity and calculation of dynamic viscosity*

ISO 5904:1981, *Gymnastic equipment – Landing mats and surfaces for floor exercises – Determination of resistance to slipping*

ASTM D 3767:2003 (reapproved 2008), *Standard practice for rubber – Measurement of dimensions*