AS 60903:2022

Australian STANDARD®

STANDARDS Australia

Live working — Electrical insulating gloves (IEC 60903:2014 (ED. 3.0) MOD)

AS 60903:2022

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The following are represented on Committee EL-068:

Australian Electric Vehicle Association
Australian Industry Group
Communications, Electrical and Plumbing Union — Electrical Division
Consumers Federation of Australia
Electric Energy Society Australia
Electrical Regulatory Authorities Council
Electrical Trade Union, Vic.
Energex (A subsidiary of Energy Queensland)
Energy Networks Australia
Engineers Australia
Institute of Electrical Inspectors
Master Electricians Australia
National Electrical and Communications Association
Victorian WorkCover Authority (WorkSafe Victoria)

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Live working — Electrical insulating gloves (IEC 60903:2014 (ED. 3.0) MOD)

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Preface

This Standard was prepared by the Standards Australia Committee EL-068, Live Working, to supersede AS/NZS IEC 60903:2020, *Live working — Electrical insulating gloves*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

If a Standard is referenced in legislation, the legislative instrument or regulation specifies the date on which the Standard or Amendment comes into effect. Regulatory Authorities have indicated 24 months as an appropriate transition period from the date of publication for the application of this Standard. Refer to the relevant regulatory authority for further information.

The objective of this document is to specify requirements for electrical insulating gloves and mitts that provide protection of the worker against electric shock.

This document also covers electrical insulating gloves with additional integrated mechanical protection referred to in this document as “composite gloves”.

This document is an adoption with national modifications, and has been reproduced from IEC 60903:2014, *Live working – Electrical insulating gloves*.

The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

The modifications comprise of two additional voltage classes of gloves to cover Australian conditions. This will provide more flexibility in specifying a suitable insulating glove for the application, enhanced safety, durability and user comfort.

Appendix ZZ lists the modifications to IEC 60903:2014 for the application of this document in Australia.

As this document has been reproduced from an International document, the following applies:

(a) In the source text “this International Standard” should read “this document”.

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LIVE WORKING – ELECTRICAL INSULATING GLOVES

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 60903 has been prepared by IEC technical committee 78: Live working.

This third edition cancels and replaces the second edition of IEC 60903, published in 2002. It constitutes a technical revision.

The major changes are:

– clarification of the requirements and tests for *long gloves*;
– introduction of a new special property for gloves resistant to leakage current;
– removal of the requirement for an area to mark the date of inspection;
– for the thickness measurement, no other instrument than the micrometer with specified parameters is allowed;
– the d.c. electric tests are no longer included in the normative part of the document but a proof test is suggested at the production level where a d.c. use of gloves is expected, as presented in a new informative Annex E;

– preparation of the elements of evaluation of defects, and general application of IEC 61318:2007;

– the normative Annex C on sampling plans and procedure has been deleted (not applicable according to IEC 61318:2007);

– in the new normative Annex F, updating of the characteristics of the liquid specified for tests on gloves of category H, according to the latest edition of ISO 1817;

– the informative Annex H on acceptance tests has been deleted (consideration now included in IEC 61318:2007);

– introduction of a new normative Annex H on classification of defects;

– introduction of a new informative Annex I on the rationale for the classification of defects;

– review of the annex on in-service recommendations.

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

FDIS	Report on voting
78/1043/FDIS	78/1056/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.

Terms defined in Clause 3 are given in italic print throughout this standard.

The committee has decided that the contents of this publication will remain unchanged until the stability 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

In this document, the clauses on requirements and testing are reorganized in order to bring together the common requirements and tests, then to lay down separately those which are specific to insulating gloves for electrical protection normally worn under leather protector gloves as opposed to those specific to insulating gloves for combined electrical and mechanical protection. This arrangement meets the basic necessity that a same quality level of electrical insulation is achieved for all types of *electrical insulating gloves*.

This document 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 GLOVES

1 Scope

This International Standard is applicable to *electrical insulating gloves* and *mitts* that provide protection of the worker against electric shock.

Unless otherwise stated, the use of the term “glove” includes both gloves and *mitts*.

This standard also covers *electrical insulating gloves* with additional integrated mechanical protection referred to in this document as “*composite gloves*”.

The products designed and manufactured according to this standard contribute to the safety of the users provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use.

NOTE Insulating gloves are normally to be used in conjunction with leather protector gloves to provide mechanical protection. *Composite insulating gloves* are normally used without over-gloves.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 60212, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment*

IEC 61318:2007, *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 23529, *Rubber – General procedures for preparing and conditioning test pieces for physical test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61318 as well as the following apply.