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RUBBER GLOVES FOR ELECTRICAL PURPOSES



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Electrical and Electronic Manufacturers Association
Confederation of Australian Industry
Department of Construction
Department of Productivity
Department of Public Works and Ports, New South Wales
Electrical Contractors Associations of Australia
Electricity Supply Association of Australia
Metropolitan Water, Sewerage and Drainage Board, Sydney
Plastics Institute of Australia Incorporated
Railways of Australia
Telecom Australia

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To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvement to published standards, addressed to the head office of the Association, are welcomed.

AUSTRALIAN STANDARD SPECIFICATION

**RUBBER GLOVES
FOR ELECTRICAL
PURPOSES**

AS 2225—1978

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PREFACE

This standard was prepared by the Association's Committee on Electrical Accessories as a revision and metrication of AS C87—1964 which it accordingly supersedes.

AS C87 was an endorsement without Australian amendment of BS 697:1960. With the revision and metrication of BS 697 in 1977 the committee felt it appropriate to issue a standard in the Association's format while remaining technically identical which BS 697:1977. Acknowledgement is made of the assistance received therefrom.

This standard retains the distinction between—

- (a) gloves for use where the potential does not exceed 650 V (between any two conductors or any conductor and earth); and
- (b) three classes of gloves rated at 1100 V, 3300 V and 4000 V respectively.

The glove classes detailed under (b) above are for use only in special circumstances or in an emergency, e.g. for the purpose of saving life or averting disaster.

The double electrical test is also retained in this revised standard and is an additional safeguard to the user. Special attention is drawn to Appendix C in this regard.

It is brought to the attention of all users of this standard that rubber gloves should not afford the only means of protection for those working on electrical circuits. Every other practical precaution should be taken against risk of electric shock, and whenever possible, the circuit should be isolated.

It should be noted that gloves complying with BS 697:1977 will comply in all respects with this standard.

This standard makes reference to the following standards:

AS 2103	Dial Gauges and Dial Test Indicators (Metric Series)
AS C329	Method for the Measurement of Voltage with Spherogaps (One Sphere Earthed)
AS CK15	Code of Recommended Practice for the Storage of Vulcanized Elastomers
BS 903	Methods of Testing Vulcanized Rubber
BS 2918	Electric Strength of Solid Insulating Materials at Power Frequencies

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard Specification for RUBBER GLOVES FOR ELECTRICAL PURPOSES

1 SCOPE. This specification sets out the requirements for four classes of rubber gloves used for electrical purposes where the working potentials do not exceed 650 V, 1100 V, 3300 V or 4000 V, respectively (whether a.c. r.m.s., or d.c.), when measured between any two conductors or between any conductor and earth.

NOTE: For the purposes of this specification the term 'glove(s)' applies to rubber gloves used for electrical purposes.

2 MANUFACTURE.

2.1 Composition. Gloves shall be made from good quality raw material or raw synthetic rubber or from a mixture of these, in conjunction with suitable compounding ingredients. Compliance with this clause shall be determined by the test requirements of Clauses 2.3 to 2.6 and of Clauses 3 and 4.

The gloves shall not contain any substance known to be toxic or otherwise harmful under normal conditions of use.

2.2 Construction. Gloves shall be made by a dipping process, using either latex or a rubber solution. They shall be free from patched areas, embedded foreign matter, porosity, blisters (other than shallow broken blisters) and other physical defects. Minor surface irregularities that can cause no hazard or significant degradation in quality or life may be disregarded.

2.3 Tensile Strength and Elongation of Break. The tensile strength and elongation at break of the rubber forming the gloves shall be determined in accordance with BS 903: Part A2, using type 2 dumb-bell test pieces cut with their long axes parallel to the length of the fingers.

The tensile strength shall be not less than 14 MPa.

The elongation at break shall be not less than 600 percent.

2.4 Tension Set. The tension set of the rubber forming the gloves shall be determined in accordance with BS 903: Part A5, except that the strain value shall be 400 ± 10 percent, the duration of the test shall be 10 min commencing immediately after straining, the recovery time shall also be 10 min. Type 2 test pieces shall be used and the temperature of the test shall be $23 \pm 2^\circ\text{C}$. The tension set shall not exceed 10 percent.

2.5 Resistance to Ageing. After ageing for 7 days at $70 \pm 1^\circ\text{C}$ in accordance with BS 903: Part A19, method A or B, the rubber forming the gloves shall retain not less than 85 percent of its tensile strength and elongation at break.