

Australian Standard 2435—1981

ELASTOMERIC HOSE FOR RAILWAY AIR BRAKES



STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Institute of Petroleum Limited
Confederation of Australian Industry
Country Roads Board, Victoria
Electricity Trust of South Australia
Government Stores Department, N.S.W.
Metropolitan Water, Sewerage and Drainage Board, Sydney
Railways of Australia Committee
Society of Automotive Engineers—Australasia
State Electricity Commission of Victoria
The Institution of The Rubber Industry

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ELASTOMERIC HOSE FOR RAILWAY AIR BRAKES

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PREFACE

This standard was prepared by the Association's Committee on Industrial Hose. Its preparation was requested by the Dunlop Industrial and Aviation Division which pointed out the need for rationalization and variety reduction of the various hoses required by the railways systems operating throughout Australia. The request received the support of major, relevant user organizations among public utilities and from the private sector.

Although this standard is restricted to elastomeric hose, the feasibility of preparing a standard admitting plastics components is under investigation.

Appendix A presents purchasing guidelines including contractual requirements and directs attention to matters requiring consideration at the time of the enquiry and/or order. The intention is to avoid misinterpretation or other problems and to ensure a complete understanding of hose requirements by both purchaser and supplier.

In the preparation of the standard, the committee took cognizance of the following documents and acknowledgement is made of the assistance received therefrom:

Australian and New Zealand Railways Specification A-10-77, Specification for Air Brake Hose Pipes

Australian and New Zealand Standard Adopted C 1569-1924 Revised C 3725—1944, Specification Air Brake Hose Pipes

Victorian Railways Contract No. G.SS.109 for Brake Hose Pipes

Public Transport Commission of NSW Specification No G7-1971, Section V, Specification for Air Brake Hose Pipes

BS 3682, Railway Brake Hose

This standard requires reference to the following Australian standards:

- | | |
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| AS 1179 | Glossary of Terms for Rubber Hose |
| AS 1180 | Methods of Test for Hose Made from Elastomeric Materials |
| | 1180.1—Dimensions |
| | 1180.2—Tensile Strength and Elongation |
| | 1180.3—Accelerated Ageing |
| | 1180.4B—Ply Adhesion—Autographic Method |
| | 1180.5E—Hydrostatic Pressure—Expansion and Distortion Test |
| | 1180.7E—Resistance to Oil |
| | 1180.7F—Resistance of Lining and Cover to Ozone |
| AS 1257 | Bore Sizes, Test Pressures and Tolerances on Lengths of Elastomeric Hose |

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CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL REQUIREMENTS	
1.1 Scope	4
1.2 Application	4
1.3 Materials and Construction	4
1.4 Marking	4
SECTION 2. PROPERTIES AND TEST REQUIREMENTS	
2.1 General	6
2.2 Tensile Strength and Elongation	6
2.3 Adhesion	6
2.4 Oil Resistance	6
2.5 Hydrostatic Pressure Tests	6
2.6 Resistance to Ozone	6
2.7 Wicking Test	6
2.8 Resistance to Bending	6
APPENDICES	
A Purchasing Guidelines	7
B Method for Determining Wicking Properties	8

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
ELASTOMERIC HOSE FOR RAILWAY AIR BRAKES

SECTION 1. SCOPE AND GENERAL REQUIREMENTS

1.1 SCOPE. This standard specifies requirements for elastomeric hose used in railway compressed air braking systems.

1.2 APPLICATION. The standard applies to elastomeric hose intended for use as brake pipe coupling hoses in railway compressed air braking systems, suitable for a maximum working pressure of 1.0 MPa within an ambient air temperature range of -10°C to 65°C .

1.3 MATERIALS AND CONSTRUCTION.

1.3.1 Hose Construction. The hose shall consist of a lining, a reinforcement and an outer cover. The material requirements for these parts shall be as follows:

- (a) *Lining.* The lining shall be uniform in quality and thickness, non-porous, free from air holes and other defects. In addition, the lining shall be capable of complying with the relevant requirements of Section 2.
- (b) *Reinforcement.* Hose shall be reinforced.
- (c) *Outer cover.* The outer cover shall be abrasion-resistant, uniform in quality and thickness, non-porous, free from air holes and other defects. In addition, the cover shall be capable of complying with the relevant requirements of Section 2.

1.3.2 Dimensions and Tolerances. The dimensions and tolerances of hose shall be as follows:

- (a) *Diameter and component thicknesses.* When measured in accordance with AS 1180.1, the diameters and components shall conform to the values shown in Table 1.1 (see Appendix A, Paragraph A2.1(b)).
- (b) *Bore.* When examined visually, the bore shall be concentric with the outer cover. A steel ball having a diameter equal to the minimum allowable bore size less 0.4 mm shall easily pass through the hose while subjected to a pressure of 70 kPa.

- (c) *Length.* The hose shall be supplied in 610 mm cut lengths or in long lengths not less than 18.3 m. The tolerances on cut lengths of hose shall be as specified in AS 1257.

NOTE: The length of hose is a matter for agreement between the purchaser and the supplier (see Appendix A, Paragraph A2.1(c)).

1.4 MARKING. Each manufactured length of hose shall be permanently and clearly marked at a distance of 150 ± 10 mm from one end and then every 610 ± 5 mm with the information shown in Fig. 1.1. Alternatively, the location of marking shall be as specified by the purchaser (see Appendix A, Paragraph A2.1(d)).

The information shown in Fig.1.1 shall appear on a clearly embossed red-coloured label, with relief not less than 0.8 mm, permanently bonded to the cover of the hose. The colour of the label shall be as specified by the purchaser (see Appendix A, Paragraph A2.1(e)).

NOTE: Manufacturers who place the number of this Australian standard on railway air brake hose, packaging or literature related thereto should ensure that the hose is manufactured to comply with the standard.

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