

Australian Standard[®]

**HOSE AND HOSE ASSEMBLIES
FOR LIQUID CHEMICALS**

This Australian standard was prepared by Committee RU/1, Industrial Hose. It was approved on behalf of the Council of the Standards Association of Australia on 18 October 1982 and published on 7 February 1983.

The following interests were represented on the committee responsible for the preparation of this standard:

Australian Gas Association
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
Plastics Institute of Australia, Incorporated
Plastics and Rubber Institute
Railways of Australia Committee
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State Electricity Commission of Victoria
The Institution of The Rubber Industry

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PREFACE

This standard was prepared by the Association's Committee on Industrial Hose under the direction of the Committee on Standards for the Rubber Industry.

In the absence of any corresponding international or national standard, cognizance was taken of other Australian standards for hose and methods of test, U.S.A. Rubber Manufacturers Association Hose Handbook and hose specifications, as well as sundry data from manufacturers' hose catalogues. Acknowledgement is made of the assistance obtained from these sources.

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 to ensure a complete understanding of product requirements by both purchaser and supplier.

CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL REQUIREMENTS	
1.1 Scope	3
1.2 Referenced Documents	3
1.3 Materials	3
1.4 Dimensions	3
1.5 Coupling and Assembly Requirements	3
1.6 Freedom from Defects	3
1.7 Marking	3
SECTION 2. PERFORMANCE REQUIREMENTS	
2.1 Ply Adhesion	4
2.2 Hydrostatic Pressure Tests	4
2.3 Resistance to Liquids	4
2.4 Corrosion Resistance	4
2.5 Ozone Resistance	4
2.6 Abrasion Resistance	4
2.7 Hose and Coupling Compatibility	4
APPENDIX A. PURCHASING GUIDELINES	5

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
HOSE AND HOSE ASSEMBLIES FOR LIQUID CHEMICALS

SECTION 1. SCOPE AND GENERAL REQUIREMENTS

1.1 SCOPE. This standard specifies requirements for hose and hose assemblies for conveying acids, alkalis, solvents and other liquid chemicals.

1.2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1180	Methods of Test for Hose Made from Elastomeric Materials
1180.1	Dimensions
1180.3	Accelerated Ageing
1180.4B	Ply Adhesion — Autographic Method
1180.5A	Hydrostatic Pressure — Burst Test
1180.5C	Hydrostatic Pressure — Change-in-length Test
1180.5D	Hydrostatic Pressure — Leak Test
1180.5E	Hydrostatic Pressure — Expansion and Distortion Test
1180.7A	Resistance of Hose Lining and Cover to Liquids
1180.7B	Resistance to Liquids — Physical
1180.7F	Resistance of Hose Lining and Cover to Ozone
1180.7G	Corrosion Resistance
1180.11	Hose and Coupling Compatibility — Tensile Method
AS 1257	Bore Sizes, Test Pressures and Tolerances on Lengths of Elastomeric Hose
AS 1683	Methods of Test for Rubber
1683.21	Rubber Vulcanized — Determination of Abrasion Resistance Using a Rotating Cylindrical Device

1.3 MATERIALS.

1.3.1 Hose Surfaces.

1.3.1.1 Internal. The internal surface of the hose shall be non-porous and chemically and physically resistant to the liquid conveyed at the specified working temperature range (see Appendix A, Paragraph A3(a) and (b)).

1.3.1.2 External. The external surface of the hose shall be resistant to intermittent exposure to the liquid conveyed. Where specified, an abrasion resistant

cover shall be provided (see Appendix A, Paragraph A3(c)).

1.3.2 Couplings. Either the material of the coupling shall be resistant to the liquid conveyed, or the coupling shall be fitted so that it cannot come in contact with the liquid.

1.4 DIMENSIONS. When hose is measured in accordance with AS 1180.1, the internal diameter shall conform to the appropriate value given in AS 1257. The tolerance on cut lengths shall be as specified in AS 1257.

1.5 COUPLING AND ASSEMBLY REQUIREMENTS. Couplings shall be designed, constructed and fitted so that the hose assembly will comply with the minimum burst pressure and tensile force requirements specified in Section 2, without showing any sign of failure or leakage.

NOTE: Care should be taken to ensure that couplings are properly fitted so as not to damage the reinforcement or other vital components of the hose.

1.6 FREEDOM FROM DEFECTS. The internal and external surfaces shall be uniform and concentric and the materials of construction shall be free from deleterious defects.

The internal surface shall be free from raised spots and lumps and, for hoses not built on mandrels, a steel ball having a diameter equal to the minimum allowable internal diameter less one half of the minus tolerance shall pass easily through the hose while it is subjected to an internal pressure of 70 kPa.

1.7 MARKING. Each manufactured length of hose and/or hose assembly shall be permanently and clearly marked with the following information:

- (a) The manufacturer's or supplier's name or identification.
- (b) Manufacturer's construction coding.
- (c) The year of manufacture.
- (d) The nominal internal diameter of the hose, in millimetres.
- (e) The maximum working pressure of the hose.
- (f) Additional information as specified by the purchaser (see Appendix A, Paragraph A3(h)).

NOTE: Manufacturers who place the number of this Australian standard on hose and hose assemblies, packaging or literature related thereto should ensure that the hose and hose assemblies are manufactured to comply with the standard.