Australian Standard™

Hose and hose assemblies for distribution of petroleum and petroleum products (excepting LPG)

Standards Australia

This Australian Standard was prepared by Committee RU/1, Industrial Hose. It was approved on behalf of the Council of Standards Australia on 31 May 2000 and published on 25 July 2000.

The following interests are represented on Committee RU/1:

Australasian Railway Association

Australian Chamber of Commerce and Industry

Australian Gas Association

Australian Industry Group

Plastics and Chemicals Industries Association

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This Standard was issued in draft form for comment as DR 99055.

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Hose and hose assemblies for distribution of petroleum and petroleum products (excepting LPG)

Originated as AS 2683—1984.
Previous edition 1989.
Third edition 2000.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3479 0

PREFACE

This Standard was prepared by the Joint Standards Australia Committee RU/1, Industrial Hose, to supersede AS 2683—1989.

This Standard is the result of a consensus among the representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this Standard is to provide a hose that is safe to use with petroleum and petroleum products.

This Standard differs from the 1989 edition in the following respects:

(a) Adhesion properties—not applicable to composite hose.

(b) Inclusion of dynamic bend radius for aircraft hose.

(c) Twisting aspects.

(d) Requirements for proof pressure and crush recovery have been included.

This Standard differs from ISO 1825:1996, *Rubber hoses and hose assemblies for aircraft ground fuelling and defuelling—Specification*, and ISO 2929:1981, *Rubber hoses for bulk fuel truck delivery—Specification*, in the following respects:

(i) The Standard has dilation requirements where metered pumps are used.

(ii) The Standard has a grade of hose suitable for an aromatic hydrocarbon content greater than 50 percent.

(iii) The Standard specifies an ambient range of temperature of –20°C to +55°C which is more suitable for Australia, compared with the extra low temperature requirement of –40°C specified in both ISO Standards.

(iv) ISO 2929 cannot be adopted as it is not intended for aviation fuel, and is also not suitable for metered pumps. Also, the Types of hose are only pressure regulated, and the full range of electrical kinds are not covered.

(v) ISO 1825 cannot be adopted because the aromatic hydrocarbon content cannot exceed 30 percent by volume. Also it does not cover the use of hose with metered pumps.

Appendix H, Method for determining crush recovery of aircraft hose, has been adopted from ISO 1825:1996.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for hose and hose assemblies for conveying petroleum and petroleum products, except for liquefied petroleum gas, at product temperatures up to 65°C in ambient temperatures ranging from –20°C to 55°C.

The Standard is intended for hose applications involving road and rail tankers, metered pumps, farm tanks, reeling, aviation and general plant operations.

NOTES:

1 A separate Standard, AS 2117, provides for hoses used for transferring liquid petroleum products to and from marine tankers or bunkering vessels or for similar duties ashore.

2 For product temperatures above 65°C, the manufacturer should be consulted for special conditions applicable to the use of the hose.

3 Guidelines and advice on information to be supplied at the time of placing an enquiry or an order are set out in Appendix A.

4 A guide to the user of hose assemblies for continued in-service performance has been included as Appendix G.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS		
1180	Methods of test for hose made from elastomeric materials	
1180.1	Method 1:	Dimensions
1180.3	Method 3:	Accelerated ageing
1180.4B	Method 4B:	Ply adhesion—Autographic method
1180.5	Method 5:	Hydrostatic pressure
1180.7A	Method 7A:	Resistance of hose lining and cover to liquids
1180.7B	Method 7B:	Resistance to liquids—Physical
1180.7J	Method 7J:	Resistance to vacuum
1180.11	Method 11:	Hose and coupling compatibility—Tensile method
1180.13A	Method 13A:	Determination of electrical resistance of hose and hose components
1180.13B	Method 13B:	Determination of electrical resistance of hose assembly
1180.13C	Method 13C:	Determination of electrical continuity of hose assembly with reinforcing wire(s)
1257	Bore sizes, test pressures and tolerances on lengths of elastomeric hose	
1683	Methods of test for elastomers	
1683.20	Method 20:	Standard temperatures, humidities and times for conditioning and testing test pieces
1683.24	Method 24:	Rubber—Vulcanized—Determination of resistance to ozone cracking—Static strain test
2117	Hose and hose assemblies for petroleum and petroleum products—Marine suction and discharge	