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Australian Standard®
2792—1985

FIRE HOSE—DELIVERY LAYFLAT

AS 2792—1992 Fire hose—Delivery layflat
(In Professional Package 44A) 22pp *FF*

Specifies general and performance requirements for delivery layflat fire hose of two types, viz., percolating and non-percolating. Appendices deal with performance test procedures, additional requirements for fire hose, which may be specified by the purchaser, and detailed advice and recommendations on the information to be supplied by the purchaser at the time of enquiry or order.

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This Australian standard was prepared by Committee FP/9, Fire Hydrant Installations. It was approved on behalf of the Council of the Standards Association of Australia on 9 April 1985 and published on 10 May 1985.

The following interests are represented on Committee FP/9:

Australian Uniform Building Regulations Coordinating Council
Board of Fire Commissioners of New South Wales
Building Owners and Managers Association of Australia
Commonwealth Fire Board
Confederation of Australian Industry
Department of Aviation
Department of Defence
Department of Housing and Construction
Fire Protection Industry Association of Australia
Insurance Council of Australia
Melbourne and Metropolitan Board of Works
Metropolitan Fire Brigades Board, Melbourne
Metropolitan Water, Sewerage and Drainage Board, N.S.W.
Western Australian Fire Brigades Board

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AMENDMENT No 1
to
AS 2792—1985
FIRE HOSE—DELIVERY LAYFLAT

REVISED TEXT

The 1985 edition of AS 2792 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: This Amendment applies to Appendices C, D, and F.

Published on 5 April 1988.

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Page 11. Clause C4.

Add to the existing Clause C4:

NOTE: For the safety of test staff, precautions should be taken to restrain sudden movement of the couplings and hose in case of bursting.

AMDT No 1 APRIL 1988

Page 11. Clause D4.

Add to the existing Clause D4:

NOTE: For the safety of test staff, precautions should be taken to restrain sudden movement of the couplings and hose in case of bursting.

AMDT No 1 APRIL 1988

Page 13. Clause F4.

Add to the existing Clause F4:

NOTE: For the safety of test staff, precautions should be taken to restrain sudden movement of the couplings and hose in case of bursting.

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Page 13. Clause F4(a).

Delete existing Clause F4(a) and *substitute*:

(a) Place the hose on a horizontal, smooth, flat surface, e.g. metal roof decking.

AUSTRALIAN STANDARD

FIRE HOSE— DELIVERY LAYFLAT

AS 2792—1985

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PREFACE

This standard was prepared by the Association's Committee on Fire Hydrant Installations. It covers percolating and non-percolating delivery fire hose in various grades according to their intended working pressures.

For some time a variety of specifications for fire hose have been used by various organizations. The committee examined these and accepted their broad principles, but has adapted some requirements to suit Australian conditions.

In the preparation of this standard, account has been taken of the following documents:

Central Fire Brigades Advisory Council (England and Wales), Scottish Central Fire Brigades Advisory Council—Joint Committee on Design and Development of Appliance and Equipment: Specification JCDD/1/1, Requirement Specification for Non-percolating Delivery Hose for Fire Brigade Use (With or Without an Outer Coating or Jacket).

Department of Defence: DEF(AUST) 5195, Australian Defence Standard for Hose, Synthetic Fibre, Rubber Lined (Fire Fighting, Delivery, 38 mm, 50 mm, 63 mm and 70 mm) Specification.

Board of Fire Commissioners of New South Wales:
Requirement Specification for Non-percolating Delivery Hose for Fire Brigade Use.

Department of Housing and Construction:
Specification for Fire Hose.

BS 6391—1983, Non-percolating Layflat Delivery Hoses and Hose Assemblies for Fire Fighting Purposes.

Fire hose is required to be constructed to resist high pressures under working conditions. Consequently the assessment of the performance of hose under various test conditions specified is intended to be a measure of the reliability of the fire hose during its most onerous service.

Appendix A to the standard sets out properties and requirements for fire hose that may be specified by the purchaser. Appendix B provides purchasing guidelines.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
FIRE HOSE—DELIVERY LAYFLAT

FOREWORD

In the absence of a fixed fire protection system, the most convenient method of delivering water to a fire is by means of a flexible hose.

The first fire hose was made of leather with longitudinal seams hand-sewn or joined by rivets. This presented a number of problems including mass, lack of flexibility and the difficulty of repairing seams part way along the length.

Consequently in Scotland around 1850, a more flexible, lighter and seamless hand woven flax hose was produced. The major disadvantage lay in the slow production rate, but this was overcome by the development of weaving machines which are now used for the manufacture of hose jackets.

This standard is concerned with two types of fire hose commonly known as layflat fire hose, viz percolating and non-percolating.

Percolating hose may be made from natural fibre, or synthetic fibre, or blends of both which may be unlined or lined with natural or synthetic material or vulcanized natural rubber lining. Percolating hose is generally lighter than non-percolating hose of the same size, and because water seeps through the jacket, the hose provides a degree of self-protection against embers and flame when in use. For this reason percolating hose is not subject to the heat test. Further, the abrasion test cannot be satisfactorily carried out on a wet jacket and is not applied to percolating hose. The rate of percolation in a natural fibre hose is controlled by the swelling of the fibres as they absorb water. Because synthetic fibres have a lower water absorption, the rate of percolation is controlled by a thin lining.

The prime reason for using non-percolating hose is to minimize water damage to property from seepage. It may be used for the application of foam. Because the lining is thicker than in a percolating hose, the inner surface is smoother, resulting in lower pressure losses due to friction. Where resistance to abrasion or chemical attack is a factor, coated non-percolating hose should be considered.

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard specifies the dimensional and performance requirements for layflat delivery fire hose of two types, viz percolating and non-percolating.

NOTE: Guidelines for the purchasing of fire hose are given in Appendix B.

1.2 APPLICATION. Layflat delivery fire hose shall comply with the general requirements of Section 2, and with the performance requirements of Section 3..

NOTE: Additional requirements, i.e. those properties for which requirements may be specified by the purchaser in addition to the requirements of Section 2 and Section 3, are set out in Appendix A.

1.3 PURPOSE. Layflat hose in accordance with this standard, when fitted to hose couplings, is intended for the delivery of water or foam.

1.4 REFERENCED DOCUMENTS. A list with titles of the documents referred to in this standard is given in the Annex.

1.5 DEFINITIONS. For the purpose of this standard, the following definitions apply:

1.5.1 Coating—an external surface application.

1.5.2 Jacket—the woven fabric construction of the hose.

1.5.3 Natural fibre—flax, hemp, cotton or a combination of these fibres.

1.5.4 Synthetic fibre—man-made fibre.

1.5.5 Warp—the longitudinal threads of the jacket.

1.5.6 Weft—the circumferential threads of the jacket.

1.5.7 Lining—a vulcanized natural rubber or synthetic interior surface application.

1.5.8 Percolating hose—hose which is manufactured to allow water permeation through the jacket.

1.5.9 Non-percolating hose—hose which is manufactured to prevent water permeation through the jacket.

1.5.10 Extruded hose—a non-percolating hose consisting of a jacket onto which the lining and coating are applied by an extrusion process.

1.5.11 Layflat—a characteristic of softwall hose which assumes a flattened shape when empty.

1.6 CLASSIFICATION. Fire hose shall be classified according to maximum working pressure in accordance with Table 1.1.

TABLE 1.1
CLASSIFICATION OF FIRE HOSE

Class	Working pressure (maximum) kilopascals	Proof test pressure kilopascals	Burst pressure (minimum) kilopascals
L	1000	1500	2500
M	1400	2100	3500
H	2100	3150	5250

NOTE: L = Low, M = Medium, H = High.